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INTER-RELATIONS OF THE PHYSICIANS AND THE HOSPITAL

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The Shattuck Lecture*

THE hospital and the physician are partners in a common problem—namely the institutional care of the sick. By the word hospital we do not mean an architectural structure, but a corporate body as represented by the Board of Managers with its President and their Executive Officer, the Superintendent.

Partners can work with greater harmony and better success if their relative duties are defined and if there exists a coöperative spirit based on mutual understanding and confidence.

The main duties of the hospital are:

- (1) The financial support of the institution. This includes the collection of charges, raising of funds from the public and their investment and expenditure;
- (2) The business administration;
- (3) Feeding and housing of the patients and staff and all the housekeeping involved;
- (4) Providing diagnostic and therapeutic facilities for the use of the physician;
- (5) Maintenance of an adequate nursing service;
- (6) Housing of hospital records and making them always available;
- (7) The determination of the economic and social requirements for admission.

The duties of the physician are:

- (1) Professional care of the patient, whether he be in the ward, in the private rooms or in the out-patient department;
- (2) Responsibility for the work of the diagnostic and therapeutic laboratories, and research;
- (3) The maintenance of proper records;
- (4) Responsibility for professional requirements for admission;
- (5) Supervision of the nursing of the patients.

The policies of administration and of inter-relations between the hospital and physician vary greatly throughout the country according to the character of the hospital and the community which it serves. They are affected not only by the size and character of the community, but by the relative proportion of free and private patients, by the kind of patients

admitted—that is, whether it is a general or a special hospital—and by the traditions of the place. There are, however, some fundamentals which should be recognized by both partners in this work which are applicable in all of these varying conditions. The hospital should try to meet the medical needs of the community, both from the standpoint of the patient and that of the physician.

From the standpoint of the patient it should aim to satisfy all the medical needs of the individual which cannot economically, conveniently nor efficiently be met in the patient's home or the physician's office. This applies to the ambulatory patient as well as to the one who requires bed accommodations within the hospital.

From the standpoint of the physician an ideal would be to provide hospital facilities for all well qualified practitioners. This can be and is done in a good many of the smaller communities, but seems to be impossible in the larger cities. For the patients in the hospital undoubtedly receive better care if there is an organized staff of limited size and with definite responsibilities. Experience has shown better results with a separation into distinct services—medical, surgical, laboratory, obstetrical, etc. Experience also shows better results if the responsibilities for each service are definitely placed on one individual. It is also wiser not to have these units too large, as there is a definite limit to the number of patients which one head can possibly supervise. We often see two or more separate services of the same kind in the larger hospitals. So in the more densely populated communities a given hospital can offer facilities to only a limited percentage of the physicians of that community. It should be the duty of that hospital, however, as far as its means permit, to make it possible for the members of its professional staff to fulfill their duties so conveniently and expeditiously that they may render the greatest amount of service with as little waste of time, effort and money as possible.

With the development of hospitals and the improvement in hospital care a number of changes have occurred. Formerly these insti-

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tutions were founded and maintained for the free care of the indigent poor. Today a large percentage of patients contribute something toward the cost of their care. Even some of the municipal hospitals are beginning to collect something from their patients. The amount of free care which hospitals provide varies tremendously throughout the country according to the character of the community served. The highest percentage of free care is usually found in the larger cities where the proportion of the very poor is greatest. This is balanced by the more generous contributions made by the well-to-do portion of the population. The percentage of free care, however, does not entirely follow the population, as in some of the newer communities as in the Middle and Far West there may be very little free hospital care even in the larger cities. It is possible that tradition has something to do with this fact. As compared with the old "free" days, however, the hospital does receive more money from its ward patients. But in spite of this increase in the receipts, the total cost has gone up with the gradual improvement of hospital care. Instead of its being possible to maintain a hospital at sixty or eighty cents per bed per day, figures nowadays run up as high as six or seven dollars per bed per day in some of the teaching hospitals and the cost is constantly increasing. The financial responsibility of a Board of Managers is always an uncertain one, for endowment sufficient for today will probably be totally inadequate ten years from now. In earlier days, if the patients had comfortable quarters with sufficient and proper food there was little else for the Board to provide beyond nursing, operating, autopsy and housekeeping facilities. Since that time the latter have become more complicated and there have developed, as essentials for the proper care of the sick, X-ray facilities, both diagnostic and therapeutic, the various laboratories, the different forms of physiotherapy, the record room, secretaries, the social service department and aids of various kinds.

The problem is further complicated by a change in the attitude of the hospital toward the patient. Formerly the relationship between the two began with his admission to the hospital and ceased when he left its doors "cured" of his complaint but usually unable to resume civic responsibilities. During his stay the hospital's responsibilities were confined to the individual within its four walls. With the increasing realization of the importance and opportunities of the out-patient department, the extrinsic work of the hospital has increased. Medical service is spreading to the patient's environment, both at home and at work, and the varying contacts of the hospital with other health and charitable organizations are becoming more complex and manifold. Much of this extrinsic work of the hospital is social or eco-

nomie, yet a great deal of it will always be medical in character and therefore will require the same coöperative attack by the hospital and physician as is needed within the walls of the institution.

From the standpoint of the physician, hospital service has also changed a good deal. It has become a much more serious matter. Twenty-five years ago an attending physician spent an hour or so making his rounds and was through for the day. The attending surgeon perhaps spent even less time in the wards, though more in the operating room. Today the diagnosis of a case is more time-consuming; the records are more complicated and the attendings spend more time in the laboratories. In many hospitals even the senior men have their regular hours in the out-patient department, the diagnostic clinic and a weekly session with follow-up cases. Staff rounds and conferences, meetings of the various committees, add to his hours until many of the staff find their hospital hours are greater than those spent on their outside work. In some hospitals, especially those intimately connected with Medical Schools, this development has gone still further and certain individuals have found it to the advantage of their service as well as to themselves to devote all their energies to their hospital work with no outside practice at all.

This development has not been limited to the clinical service, but has also been taking place in the laboratories. In fact the men in the laboratories have led the way in this matter. Not only have the sciences of pathology and bacteriology, bio-chemistry, physiology and pharmacology as applied to the study of the patient's condition broadened tremendously, but the opportunities for study and investigation along these lines within the hospital have appealed more and more to men of this type. During my own internship the laboratory service was simple. The junior did the urinalysis and was beginning to do a few blood counts; the autopsies were uncommon enough to be events of note and the pathologists had one technician who prepared the sections and carried on some primitive bacteriological work. At that time the pathologists were practicing physicians who gave devoted but limited service. Gradually his work required the full energies of more and more physicians and more and more assistants. Today there are working in the laboratories of the same hospital twenty-nine physicians, fifteen technicians, seven record-room clerks, as well as secretaries and stenographers, not to mention porters, dishwashers and mortuaries.

One of the most promising developments of hospital functions has been that of the out-patient department. It is not many years since the usual O.P.D., or dispensary, was a neglected and poor sort of affair. It was not unusual to

have 150 or 200 patients handled in two hours by perhaps four or five physicians, with two or three nurses assisting. That did not leave much time for thorough examination, laboratory tests or careful diagnosis. The treatment was haphazard and careless. The staff was made up entirely of younger men who were waiting their turn to get "an inside appointment." Too much credit cannot be given to Richard Cabot for making the out-patient service an interesting one and so a profitable and also honorable one. Today the staff is larger and in many hospitals the senior members of the staff as well as the internes have their opportunities in this part of the hospital. The out-patient and in-patient services are thus linked together and each knows what the other is doing. The effect on the patient is splendid. He is looked after by the same group and the policies of his care remain the same whether his abode is within the wards or at home. The earlier and milder stages of his illness can be cared for in the out-patient department and if he must stay in the wards for a while on his discharge he returns to old friends who have followed his condition and his treatment upstairs. When such patients are requested to return to report their later results they are much more likely to respond than if they are to be seen by strangers. If a new condition or a recurrence of the old arises, they are more eager to return to where they were cared for before.

Another newer feature of out-patient work for which Dr. Cabot is largely responsible is the development of the social service side. This mechanism makes it possible to adjust the environment of the patients to their medical needs. How discouraging it was to struggle with a varicose ulcer on a leg which had to support a busy mother whose children and husband demanded her being long hours on her feet, or to recompensate a heart which must return to excessive physical exertion, or to advise a tuberculous or diabetic patient as to diet and hygiene, knowing that they could or would only carry out a tenth of the program. With the establishment of the modern social service department much better progress is being made not only in the cure but in the prevention of bodily and mental ills. In this way, in many instances throughout the country the hospital has responded to the requests of the physician and has cooperated with him in solving these problems. Such service requires much greater financial support than the old out-patient department needed, but brings splendid dividends.

The out-patient today of limited means can obtain for a very moderate fee (usually far too moderate) a thorough examination with the necessary laboratory and X-ray examinations, a careful diagnosis and thoughtful treatment, often with consultation and advice of the best medical minds of the community.

Many hospitals have provided comfortable and sometimes luxurious accommodations for the private patient who has to stay in the institution. If the number of these rooms is large enough it may be very profitable for the hospital and in some cases it helps largely in covering the cost of the ward patient.

But what has been done by the hospital for the private patient who does not need nor desire to take a private room and live in the hospital? How few institutions have met this problem? Those that have done so have for the most part concentrated on that one part of the problem, i.e., the ambulatory need of the well-to-do. The hospitals such as the Cleveland Clinic, staffed by a group of physicians who, together, cover well the whole field of Medicine, are meeting this need with success. Other groups in other cities have done the same thing. At the Mayo Clinic we see the most highly developed institution of this kind, which also cares for a goodly percentage of non or nominally-paying patients. Why should not all hospitals, with the exception of the municipal, recognize that the patient who is able and willing to pay might prefer ambulatory service at the hospital as well as the poor patient? For some reason the approval of such a policy seems to depend somewhat on the point of view. I have heard laymen ask why should a hospital provide facilities for its staff to conduct a lucrative private practice within its walls, of course with the understanding that they personally do not approve of such a plan. Yet the same individuals severely criticize the profession because the thorough study of a complicated ambulatory case requires the expenditure of so much time and money in going about to the private offices of different specialists, to say nothing of the difficulty of getting the necessary laboratory tests. If a simpler arrangement renders better medical service to the community, it should not be condemned simply because it adds also to the convenience of the physician! It is certainly far easier for the patient to go to a place like the Mayo or Crile Clinic where all this work can be done with a reasonable expenditure of time, effort and money than to obtain the same thorough examination and cooperative diagnosis in widely separated offices and laboratories. If similar opportunities were granted to the clientele of many of our hospitals it would solve their problems better, conserve the time and add to the interest of the attending staff and swell the numbers of that group of grateful and appreciative patients which is so essential for the moral and financial support of any hospital. Many surgeons attached to non-teaching hospitals have already limited their practice to the private rooms and wards of the hospital and their own offices at home, except perhaps for occasional consultations outside. They have done so because they can thus better conserve their time and energy and so render more and better service.

There seems to be widespread complaint that the rural medical problem is not being met in many districts. One solution offered is the establishment of community hospitals. These would enable the physicians of the area to render better medical service and to a greater number. To do this the hospital should provide laboratory opportunities for diagnostic aid, out-patient facilities for caring for a number of cases in a short space of time, as well as bed care for those sufficiently ill. It is easier to maintain an efficient district nursing service with such an institution than without it. But these arrangements will not avail unless there is a changed point of view and habit of the patient. He must be willing to come to the hospital whenever he is physically able instead of asking the doctor to go to him. One thing which will persuade him to this change in habit is a change in the doctor's fee—an increase in the fee for a home visit, with perhaps a decrease in that for a dispensary call.

It would seem, therefore, that the hospital and physician together have been responsible for certain real changes during the last two decades:

- (1) The recognition of the justice of the theory that each patient shall contribute what he can afford toward the cost of his hospital care;
- (2) The increase in the amount of time the staff spend at the hospital in order to properly fulfill their hospital duties;
- (3) The marked improvement in the character of the out-patient service;
- (4) The increase and improvement of private-room service within the hospital;
- (5) A fifth change which has begun to be recognized but which needs much greater development, is the attitude on the part of the physician and hospital to more adequately meet the needs of the ambulatory private patient, whether of comfortable or moderate means.
- (6) Another radical change has been the tendency on the part of the Board of Managers of the hospital and the professional staff to come into more intimate personal contact, to learn and understand each other's problems, to advise each other and to work together for the good of the whole. In at least one teaching hospital the Dean of the Medical School and the Directors of the Medical and Surgical Services are invited to all the meetings of the Board of Managers and the President of the Board and the Superintendent attend the meetings of the Medical Board. Managers and physicians serve together on certain committees which deal with subjects which have both administrative and professional aspects. Such opportunities for mutual understanding of each other's problems and difficulties, as well as peculiarities and temperaments, are most desirable.

Let us consider next the recompense which the physician receives for his hospital services.

The profession of Medicine has always been lavish in the amount of charitable work they have done. There is no one of us who is worthy of his calling who is not glad to offer free service when he feels that any real fee would be a burden on his patient. But most of us, I think, would prefer to have this a voluntary act of our own. We are irritated, to say the least, when the public demands it of us, especially if we have the feeling that an individual is not always just in his decision as to what he shall spend on private room, unnecessary special nurses, extravagant conveniences and some of the other medical frills compared to what he shall consider a fair remuneration for the physician. I remember being distinctly amused as well as irritated when a patient asked me to reduce my already moderate bill because he was too proud to ask his father for it, although he did not hesitate to have his club dues and a large percentage of his living expenses paid by the same individual!

The hospital has recognized that the ward patient shall pay what he can toward the expenses of his board and lodging. Many hospitals, especially those west of the Atlantic area, have taken the next step and allowed a small fee for professional services. But this idea has not yet reached many of the eastern hospitals. The boards of managers feel that it is just to collect three or four dollars a day from ward patients but insist that there shall be no professional charge made to these same patients! I think we would all agree that the hospital should have the first lien, but it has always seemed to me a perfectly proper policy for a very moderate fee to be paid by such ward patients as can afford it for their professional care. When no charge was made in the wards the physician was very glad to give his services to the hospital with no other recompense than the kudos that went with the position, the chance to enlarge his practice and the satisfaction of giving service. Under those conditions the time he spent in the hospital was usually not enough to interfere with an active outside practice. In many hospitals today this still holds true, but where the demands of the service are such as to require perhaps the major portion of his time, some additional reward is not only just but is becoming necessary to attract and hold the type of staff desired. This recompense can be furnished either by providing facilities for private practice within the hospital or by a definite salary. Both methods are in vogue, sometimes not only in the same hospital but within the same service. Facilities for private practice should include not only the opportunity to make use of the private rooms, the operating room and diagnostic laboratories, but also examining and consulting offices for ambulatory patients. Many hospitals are now paying definite salaries to the staff of the out-patient department. This has come about part-

ly from a sense of justice but more often, I fear, by meeting the old fixed laws of supply and demand and of competition. I think this appeared first, and certainly is more prevalent, in the tuberculosis clinics than elsewhere. The only explanation I have to offer is that funds are more easily obtained for the care of tuberculosis patients than for other purposes. In the laboratory service of the hospital there is so little opportunity for remunerative private practice that if the hospital is to obtain the full services of men in these departments a reasonable salary must be paid. This has proved so necessary that many pathologists in charge of laboratories in non-teaching hospitals receive salaries higher than the professors of pathology in the medical schools! In the clinical departments it seems wiser to make it possible to adjust the method of financial reward to the needs or preferences of the individual. There are men, especially in the teaching hospitals, who desire to devote all their time and energy to the hospital work. Some of these prefer a fixed salary, while others would rather obtain their financial reward by individual private practice within the hospital.

In teaching hospitals the duties of the professional staff are constantly broadening and if they are to be well carried out it will require a group made up of individuals of different talents. The care of the patient, the teaching, the investigation of the mysteries of the art and science of medicine and the application of new principles or methods to the prevention and cure of human ills, must all be carried on by such a group. Each member should share in all of these activities, but there will always be wide variation in the relative proportion each individual is fitted for or interested in. Therefore the policy of such a teaching institution should be broad enough to allow an adjustment of recompense to the individual needs. To some the opportunity to carry on research work unhindered by the responsibilities of private practice is the most attractive life. It should be possible to reward such a man for his hospital service by a definite salary. For others whose talents and interests lie more along clinical lines, opportunities for a reasonable amount of private practice offer the best reward. Such a policy permits men to voluntarily adjust their lives and work more happily and efficiently than where a more fixed and narrow method is in vogue. Men usually do better when they may than when they must. It will often be wise, both for the hospital and for the physician, if some of the younger group, as they change from interne and resident to attending staff, are on a definite annual salary for a few years while they develop contacts which later may lead them to opportunities for private practice. How often we see a man with a brilliant record in medical school and a successful term as interne reach an unusual degree of proficiency after

this concentrated training. He then leaves the hospital and takes up any form of medical work which is offered him in order that he may live! He may have an out-patient appointment, but while his practice is slowly growing he is only too apt to occupy his time with hack work which is of but little advantage to him and not much to the public. How much better it would be for him and for the hospital could he be given a small salary which would enable him to continue his constructive studious life by continuing to take advantage of the opportunities within the hospital. Some of these clinical men may become so interested in the investigative or other important duties of an active hospital that they will prefer to continue this arrangement for a greater length of time.

In the hospitals closely affiliated with medical schools the question of recompense has often been solved for the hospital by the salaries these men receive from the medical school. In these teaching hospitals we are more apt to see the individuals who have come to prefer to devote all their energies to their hospital work including, of course, with this the teaching responsibilities. A good deal of attention has been paid to this group of so-called full-time clinical men in recent years and many experiments are being tried in order to find out the best method of meeting the situation. The type itself is not new. For many years there have been clinical men who were so intent on the investigative side of clinical medicine, whether it was in the ward or in the laboratory or both, that they devoted the major part, if not all, of their efforts to this work. The reason was I WANT TO and not because someone said THOU SHALT! In order to lead this life they voluntarily gave up most of the luxuries which more lucrative practice would have enabled them to buy, but they were content perhaps with the sense of satisfaction of what they were learning and doing for themselves and for others. A few, perhaps, were influenced by a far-sighted vision that if they applied themselves in this way a time would come when their services would be sought to such a degree that a harvest would result. At first the numbers were few but later others were quick to profit by their example, realizing the greater opportunities for investigative work if laboratory principles were applied to clinical problems. By their very numbers they demanded a better solution of the situation than formerly existed. To lead this sort of existence in the older days one had to be either a single-minded enthusiast or possess private means. Before long it was realized that if hospitals, and especially teaching hospitals, were to obtain the services of men who desired to devote all their energies to the hospital, proper salaries must be provided for them. It soon became evident that to obtain and hold the services of the proper type of men for these positions the ordinary academic scale

of salaries was insufficient. In the past few years the salaries paid to the full-time clinicians have rapidly increased. One effect of this has been to increase that diversion of the stream of investigative minds away from the fundamental departments toward the clinical departments. This drift had already begun to take place because of the opportunity for the combination of clinical and investigative work, but the tendency has undoubtedly been magnified by the differential in salaries. This aspect of the so-called full-time problem is one of the most important and needs serious consideration by medical school administrators and the men in the clinical departments as well as those in the fundamental departments. But it is not only of interest to the physician but also should be of interest to the hospital managers. Unless the staff of the laboratory departments can be consistently recruited with able, eager, young men, the future of the hospital is as seriously threatened as is that of the medical school.

It is perfectly logical to say that if the professor of Latin or of history can live respectably and raise his family on the usual academic salary, the same thing should be true of the professor of pathology or of bacteriology, and it is always perfectly logical to make the same claim about the professor of medicine or of surgery. It may be logical, but at the same time it is awkward, if they won't. It is usually accepted as true that if a man is to continue to teach philosophy he should philosophize, and if a man is to teach pathology then he must continue to practice pathology. If he is to teach medicine or surgery he must practice medicine or surgery. It also seems to be true that there is a certain amount of stress and strain and wear and tear on the human mechanism involved in the practice of surgery or of medicine which does not hold true of philosophy or of the study of Latin or Greek. The practice of medicine and surgery is a twenty-four hour job for seven days in the week and usually a good many more months in the year than are contained in the academic calendar. The same is more true of the pathologist and the bacteriologist than of the student and teacher of French or physics. It may be that this is a perfectly good reason for men in these positions receiving more than the usual academic scale of salaries. But no matter how we reason, a marked differential in University salaries will always result in unhappiness and unrest. Therefore, they must be kept reasonably commensurate.

There is a method by which the situation can be somewhat simplified and perhaps helped. It

is not a new method, being already in vogue in several places. In hospitals affiliated with medical schools it is accepted that the professional staff is serving two masters. The members of the staff receive academic appointments from the University and are responsible to them for their educational and research work. They also receive appointments from the hospital and are responsible to its board of managers for the professional care of the patients or for the responsibilities connected with the laboratories. It is perfectly reasonable and proper that each of these responsibilities should be accepted and proper recompense made for such service. In the case of the hospital, as we have mentioned before, such recompense can be afforded in two ways: by the professional opportunities for private practice within the hospital, in return for which the individual physician has direct business dealings with the patient, or in other instances the hospital should pay an annual salary to the individual for the service he renders the hospital, whether these services be in the wards or in the laboratories. The opportunities for private work in the laboratory departments is usually so limited as to be negative, and in most instances these men would naturally prefer and deserve a reasonable salary. If this principle is accepted by teaching hospitals and if at the same time the men in the laboratory departments can have what clinical opportunities they crave, a step forward will be made in the solution of the future of these departments.

The non-teaching hospitals whose laboratories are doing enough work to require the full time of those in charge are paying salaries to the staff, and in many instances, generous salaries. It is proper and right that the teaching hospitals should pay these men salaries in addition to the salaries they receive from the university for their teaching and research activities. By this means the differential between the laboratory and the clinical departments can be adjusted to a better basis.

These are some of the changes and tendencies in the inter-relations of the physician and the hospital. The most important and that which promises best for the future is the development of cordial relationship between the two. With understanding comes mutual confidence, with confidence comes trust and tolerance, and so a coöperative attempt to render service to mankind.

ORIGINAL ARTICLES

THE FIRST SEASON OF ORTHOPEDIC WORK ON THE BOSTON FLOATING HOSPITAL

BY LOUIS A. O. GODDU, PH.G., M.D., F.A.C.S.

THE history of the Boston Floating Hospital is extremely interesting, starting as it did merely with outings two days a week at the beach, then by securing a small excursion boat, and finally expanding to its present form. The Floating Hospital is, as its name implies, a hospital in fact, with its own sterilization plant, its own laundry, refrigerating system, its own store, and

old adage that "Necessity is the mother of invention," several new ideas in the way of equipment have been developed. It was seen immediately that it would not be practical because of lack of space on the boat for storage, to equip the boat with the usual bulky apparatus. Therefore means were devised for having apparatus but still not having it take up too much room.

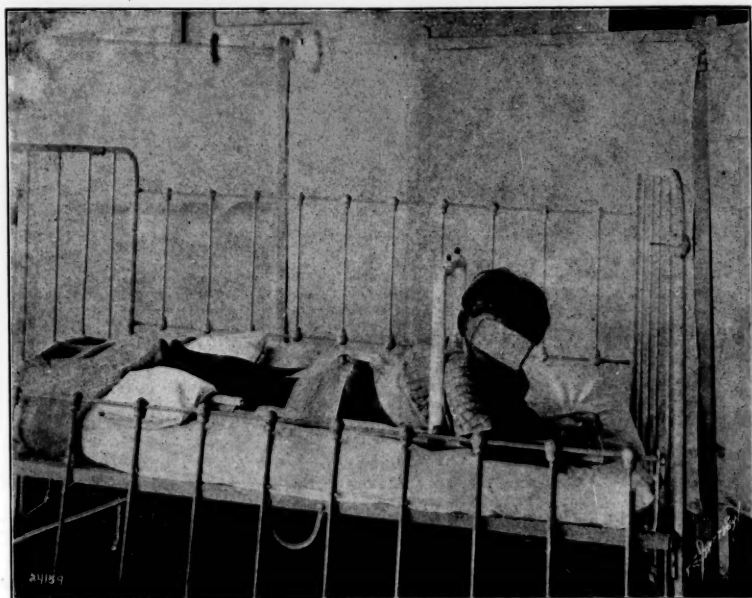


PLATE 1. Shows the child on adjustable frame together with the yoke, which prevents the lateral movement of the spine.

everything that goes with an up-to-date institution.

In the season of 1925 was organized the first Orthopedic Service of the Floating Hospital, in Ward G, which is an open ward on the after deck of the hospital and which has a capacity of eighteen beds. This was reserved for the exclusive use of Orthopedic cases. In addition many of the Day Deck cases were in great part Orthopedic. The immediate problem of this department was its equipment, and in accord with the

The first problem was in regard to the Bradford frames; the second was to provide means for taking care of the extension for deformed hips and flexion deformities; the third was for a foot rest during traction, and the fourth was to secure proper exercise for certain cases which were partially ambulatory, but because of lack of floor space could not be given the usual type of exercise.

The first problem was met as can be seen by Plate No. 1, by making all frames the standard

length of the beds, but by varying the width, by making the two ends telescope. Each frame had, with its canvas hammock, a possible variation of 4" which seemed to cover perfectly well the requirements of our cases. The telescope parts were held together by thumb screws.

Plate No. 2 shows an adjustable plane for extension that could be increased to any angle by means of long galvanized iron hinges, and the angulation adjusted by means of a double cleat on the end of the bed. This could be raised

ing, and at the four corners rollers. The whole apparatus was painted in bright colors to interest the child. A small seat was suspended from the ceiling, off centre, over one side of this platform. The height of this seat was adjustable according to indications, whether or not we wished full weight bearing, or whether we wished the child to make an effort to reach out and just touch the platform with the feet. The child was taught to try to make the center platform revolve. The interest of the child was fur-

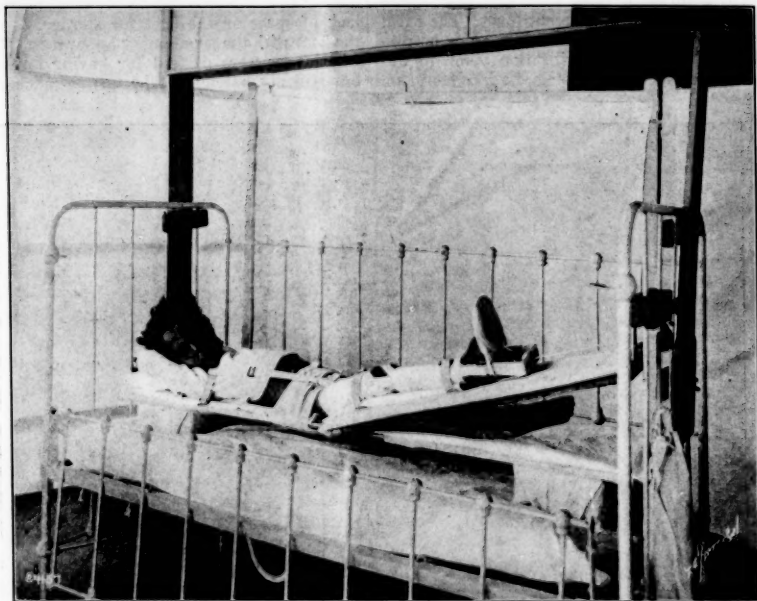


PLATE 2. Shows the hinged overhead suspension which permits folding up the apparatus. Note also the thumb screws which attach it to the bed. Illustrates the inclined plane and the hinges which attach it to its support at the foot of the bed. This also illustrates the padded aluminum foot piece, integral with the spreader, and the adjustable Bradford frame referred to in the text.

to produce any desired angle. These are easily handled, can be readily stored away and are very inexpensive. They were made by the ship's carpenter.

The toe rest was made of aluminum, the shape of which can be seen in the picture. The toe rest and spreader were made integral so that as long as traction was applied the foot rest was in place. This being made of aluminum was very light, inexpensive, did not rust, was easily handled, and proved very efficient.

Another problem was the making of what we call the Floating Hospital exerciser. (Plate No. 3.) It consisted of a platform 40" square, with a center round platform 36" in diameter. This circular platform had at its center a ball-bear-

thered by the color effect as the round platform got in motion. In this way the child could get the desired amount of exercise, an amount which could be readily controlled.

The Boat also afforded an opportunity to try the effect of heliotherapy and open air on a group of tuberculous and Rachitic cases. This treatment was given on the hurricane deck, as nearly as possible according to the Rollier method.

Tuberculosis: It is rather interesting to note the result in one case of tuberculous hip which had been in the writer's care for a year, both in an institution and at home. This had been very resistant to treatment. He had been kept in plaster for a time, then ambulatory treatment

with a brace tried, and then he had been put back again on traction without seemingly getting the best of the condition. This child was constant heliotherapy. Its particular condition prevented us giving the salt baths which we wished, but the improvement was evident. Fol-



PLATE 3. Shows the child in the suspended seat moving the revolving platform with the toes. As can be seen by the picture, the amount of weight bearing can be adjusted by varying the height of the seat.

taken on the Boat and put on traction in combination with heliotherapy. The child improved almost immediately; the hip became less sensitive, and after ten weeks on the boat, an abduction splint was put on and child has been doing very well since. This child had more or less

lowing is the more detailed history of the above case:

CASE No. 1—B. F. H. No. 4687

TONY B. Age 6 yrs. Admitted 7-7-25. Discharged 9-13-25. Improved.

Diagnosis: Tuberculous Hip.

The patient developed normally up to 4½ years of age. About that time he complained of the right leg being sore in the morning. This condition lasted for several months. He was then taken to the writer. He was put up in frame for sometime; then put up in a cast and sent home. He did not improve and was taken back to the Hospital and put on a frame again. The patient has not improved with the usual hospital and ambulatory treatment and was referred to The Boston Floating Hospital for further treatment.

Physical Examination shows the right thigh to be smaller than left with 3 cm. atrophy. Because of the tuberculous lesion the patient was put in extension with 35 degrees flexion and 3 pounds of traction. He

would be the ultimate disposition of this child. This child evidently had a marked rachitic condition; was put on anti-rachitic diet by the Medical Service and given heliotherapy on the hurricane deck. He was then placed in the exerciser and given definite periods of exercises. When the child left the Boat, he was walking and at the present time is considered exceedingly bright. The following is a full report of the case:

RENIE G. Age 27 mos. Admitted 6-30-25. Discharged 9-15-25. Improved.

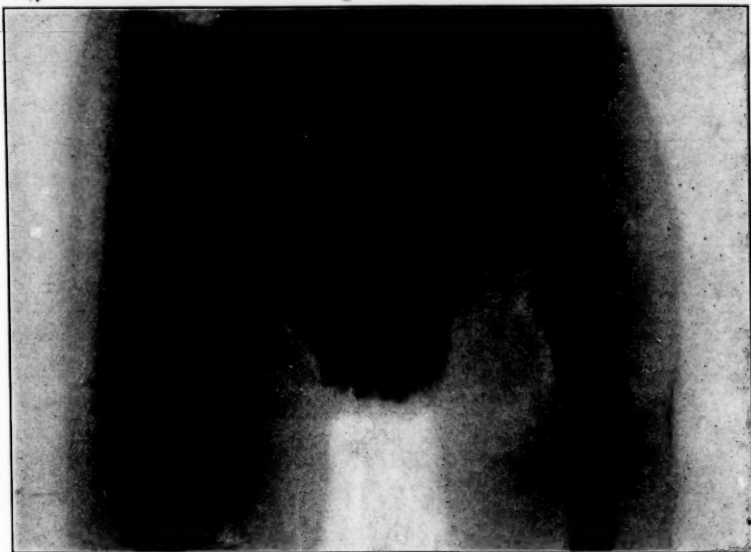


PLATE 4. Tony B. Shows T. B. hip as described in text.

cried out in his sleep with the typical night cry. Two pounds of weight were added. The patient seemed better. The hip was held in 30 degrees flexion but all motion was painful. He has been getting constant heliotherapy in Ward G. The child improved steadily and seemed very happy. The spasms of the muscles have decreased with flexion and the deformity is decreasing. The last night cry was on the 31st of July.

8-25-25—There has been great improvement in the patient the last ten days. There is practically no pain on motion. The thigh can be abducted 35 degrees and also flexed. He is placed in plaster spica for discharge to the Woonsocket Hospital where an abduction splint is to be made.

12-12-25 (Follow-up)—Child is doing well. He is walking with an abduction splint and a high sole on the good leg.

RENIE G.—CASE No. 2—B. F. H. No. 4648

This case was referred to the writer with a question of deciding as far as possible what

Diagnosis: Rickets. ? Scurvy.

This child is one of two illegitimate children by different fathers. There is no known history of tuberculosis or syphilis.

Chief Complaint: The mother has noticed the slowness of development of the child. He has never walked nor crept. He started to sit up at the age of 20 months. He was referred to us by a Children's Welfare of a city 40 miles away. The child says "mama" but no other words. He makes no apparent effort to talk. The mother and grandmother think the child has a sore spine which prevents him from sitting up or walking, their opinion being based on the fact that when they sit the child up, he cries. He has gained in weight very slowly. He is backward about the eruption of teeth. He sweats profusely about the head at night. (See Plate No. 3.)

Summary: This seems a rather severe type of rickets associated with faulty diet. We are uncertain whether there is any mental background to cause delay. The examination shows simply a poorly nourished child. The X-ray diagnosis was

Marked Rickets of the bones of both arms and legs. There are some changes about the anterior ribs suggesting scurvy.

The child improved from day to day and seemed almost precocious. He seemed to enjoy walking when supported. He was placed upon the exerciser every day without actually bearing any weight and was taught how to turn the

—discharge weight 9340 grams. He is walking now with support and there appears to be no reason why he should not continue to improve after discharge if directions are carried out.

Summary: A case of Marked Rickets and probable Scurvy which improved under anti-rachitic, anti-scorbutic diet, careful observation, and proper exercise on the revolving platform



PLATE 5. W. F. Shows degree of flexion of hips in this case before extension was applied. This child, as described in the text, is now walking with crutches.

wheel. With this he made the greatest amount of improvement. Dr. Bronson Crothers saw the case and examined him for any nervous disorder. He felt that "Due to the age of child, it was impossible to give any neurological report." His impression was that it was not a neurological case. The last note 9-11-25 states: "This patient has shown marked improvement since admission. Admission weight 7700 grams

designed by the writer to develop the muscles.

Follow-up remarks: In our follow-up of this case we heard as follows from the Day Nursery Secretary in the home town where the child is now living: "On the 16th of last December we took R. G. to the hospital for the doctor to see, and he was quite pleased with his appearance, as he could walk quite well and his legs were straight. Also the following abstract was

in the local paper of that town, as this child was exhibited as an example of the work done by this Day Nursery:

"The other child, a boy, was nearly two years old when the Day Nursery became interested in

W. F.—CASE No. 3

This particular child, as can be seen by the history, had definite deformities and was in rather a pitiable state for both the present and

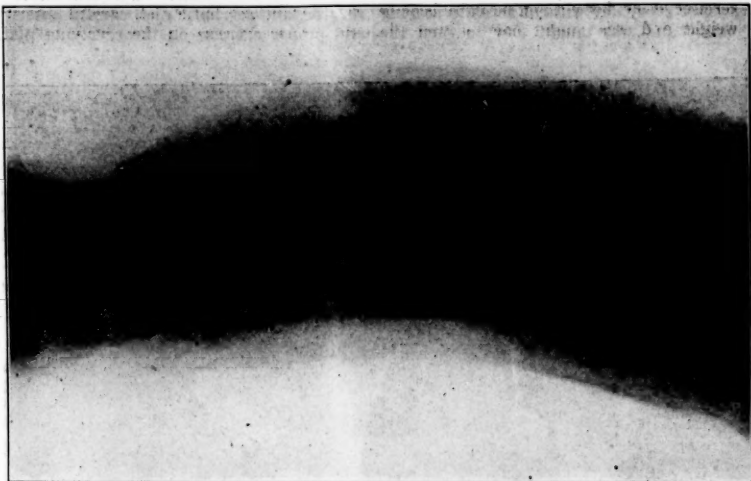


PLATE 6. J. M. Shows the radius which had an unrecognized fracture.



PLATE 7. J. M. Shows same corrected by osteotomy.

this case. He was pale and emaciated and could hardly move his legs when two years old. He was taken to the orthopedic clinic and later placed on the *Floating Hospital at Boston* for treatment. He can now at the age of two years and eight months, walk as well as any child, and his mental development, which had been retarded, is declared normal."

future. He was placed on Bradford frame, which was elevated both at the head and feet to provide for a bed pan, as he appeared to be practically incontinent. He had marked contraction of both hips. Traction was placed on both limbs to overcome this. His teeth, which were in very bad condition, were attended to and circumcision was done. The last few weeks

on the Boat he was up on the exerciser and improving. Both limbs seemed to have developed, but the flaccid paralysis of both feet persists.

to walk. The examination showed a poorly developed child from the waist down with an apparent true atrophy of the lower half of body. There were several excoriations of the buttocks. There is a blue spot on the right buttock which is probably a



PLATE 8. Two post-operative cases of rachitic bowlegs; operation performed on the Boston Floating Hospital while anchored in Boston Harbor.

The following is a full report of above case:

CASE No. 3. B. F. H. No. 4811. W. F. Age $4\frac{1}{2}$ yrs. Admitted 8-10-25. Discharged 9-13-25. Improved.

Diagnosis: Spinal Cord Lesion.

This child is said to have been injured while riding in an electric car at the age of two and one-half years, as a result of which he has never been able

to walk. **Diagnosis:** Probable cord injury at time of accident.

Physical Examination: The abdomen is prominent but flaccid. There are no hard masses. The extremities show poor nourishment and atrophy. The muscles are soft and flabby. He seems to have no power in either foot. It is a question whether he has true incontinence or is untrained.

Treatment: The child was put in bed under trac-

tion to reduce the flexion deformity. Progress notes: The child's limbs slowly extended under traction. He was then put on exerciser. Under general anaesthesia his teeth were taken care of and circumcision done. Diagnosis: Spinal Cord lesion. Admission weight 11,320 grams. Discharge weight 11,960 grams. Subsequent notes: At present writing (April 1, 1926) the child shows still further improvement.

In the ward there were several cases of marked rachitic bone deformities, both of the arms and legs. These were operated upon in the usual manner on the Boat while out in the harbor.

Diagnosis: Old Rickets with marked bowing of lower extremities.

Discharged improved. He has been under the care of Hospitals for rickets for some time. He presents marked anterior and outward lateral bowing combined with knock knees. An open osteotomy of both tibiae and fibulae was done on the Boat with good result. The child has been followed up at the Out-Patient Department and is soon to have an osteotomy of the femora.

M. R. Age 3 yrs. Admitted 8-11-25. Discharged 9-14-25. Improved. B. F. H. No. 4814.

Diagnosis: Rickets with bow-legs.

A typical case of bow-legs operated on upon the

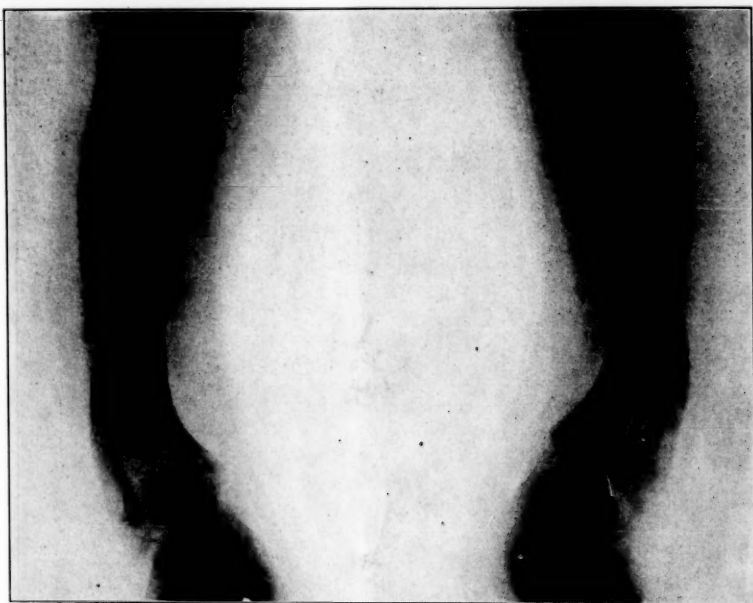


PLATE 9. M. R. Showing the degree of deformity in a case of lateral and anterior bowlegs, operated on the Boat while anchored in Boston Harbor.

The following are typical of the cases:

J. M. Age 24/12 yrs. Admitted 8-13-25. Discharged 9-15-25. B. F. H. No. 4822.

Unrecognized fracture of forearm with increased bowing. X-ray examination showed: "Old fracture of the mid-shaft of the radius with marked posterior bowing accompanied by solid bone union. Marked Rickets." An open osteotomy was done on the radius and the deformity corrected. X-ray plates show the correction. The child was discharged well. Admission weight 8180 grams. Discharge weight 8500 grams.

D. O. Age 4 yrs. Admitted 7-28-25. Discharged 9-13-25. B. F. H. No. 4768.

Boat. The X-ray before operation shows: "Marked lateral and anterior bowing of tibia and fibula of both legs. Both lower femora show lateral and anterior bowing." On August 18 an osteotomy was done on both legs. Final X-ray on 9-11-25 as follows: "Both tibiae show slight lateral displacement $\frac{1}{8}$ " from the proximal fragment. The lateral view shows perfect alignment." The child was discharged in plaster casts 9-14-25 and reported subsequently to clinic at the On-Shore department, where the casts were removed.

On the Day Deck (Out-patient Department) the Senior house-men made physical examina-

tions of all the cases, and such cases as presented orthopedic conditions were referred to the writer. Many of these cases were postural problems. The more severe type of acute orthopedic conditions and bone deformities were admitted to the ward for operation or conservative treatment as indicated. The group of cases taken care of on the Boat were under the immediate supervision of the Senior house-men. Phy-

the day deck, as regularly as possible given the proper rest period and proper exercises, all this being definitely supervised on the Boat. Because of the large number of cases it was impossible to take them all every day, but by arranging different groups on alternate days they could be accommodated. This part of the work seems to be a very real force in giving a relatively large group of children a start in the



PLATE 10. M. R. Same case after osteotomy was done, with correction showing the healed fracture.

sio-therapeutic treatment was carried out under the direction of a trained assistant. The posture cases, depending on their physical condition were treated by proper exercises and certain periods of rest. For instance, there were certain types of emaciated children definitely far below par who needed proper posture exercises, but whose physical condition was such that the exercise had to be graduated, with long periods of rest. These cases were taken on the Boat on

right direction of hygiene and general health, by teaching them the value of posture, exercise and proper food. By its subsequent "follow-up" through the On-Shore Department clinic a permanent benefit should be noted.

The medical supervision of the cases in the Orthopedic Ward was under the direction of Dr. Robert B. Hunt, of the Medical Service of the Boston Floating Hospital Staff.

THE SEASON OF 1925 ON THE BOSTON FLOATING HOSPITAL*

BY LAWRENCE W. SMITH, M.D.

THE response which met the publication of a series of case reports last year was so enthusiastic that we feel a similar presentation this year is justified.

CASE I. Irving M. Age 4 months. Hospital No. 4871. Service of Dr. Hyman Green.

Family History: This baby was one of ten children of apparently normal parents. Of these children, there have been three sets of twins. There have been no miscarriages and there is no known history of tuberculosis.

Past History: The baby was born by a normal delivery at full term. His birth weight is unknown. He was nursed for six weeks and then put on a for-

producing a marked response with an exaggeration of the twitching movements. The head is normal; the anterior fontanel is open. The pupils are equal and widely dilated but react readily to light. The ears, nose and mouth are within normal limits. The tongue is slightly coated. The throat is negative. The thorax is symmetrical. There is evidence of a rachitic rosary. Rapid respiration is present. Heart is normal except for rapid rate. The lungs are clear. There is generalized voluntary spasm of the abdominal muscles. There is no localized tenderness. No masses are palpated. The inguinal glands appear somewhat enlarged. The reflexes are hyperactive. There is a positive bilateral Kernig.

Progress Notes: The baby was admitted with a temperature of 104.6 Fahrenheit in a semi-stuporous condition with evidence pointing to meningeal irritation. During the week in the Hospital he showed a progressive loss of weight of 300 grams, in spite of receiving an adequate fluid intake averaging about 1200 cc. He took his food fairly well, but because of the dehydration was given fluid subcutaneously as well. Laboratory examinations were of some diagnostic value. A spinal puncture was performed and a clear fluid obtained under no pressure. He had from 9 to 17 stools daily, none of them showing macroscopic blood but containing large amounts of mucus. Cultures from the stools were taken and the Flexner type of dysentery bacilli were found. The case progressively failed.

Autopsy was secured. The entire interest centered in the gastro-intestinal tract. (Copied from autopsy protocol.)

G. I. Tract: The entire intestinal tract appears involved in an acute inflammatory process with marked edema and thickening of its wall, accompanied by considerable injection, especially of the ileum. The stomach is moderately distended also. On section the stomach shows moderate autolysis of its mucosa and an increase in the amount of bile-stained mucus. The duodenum presents moderate catarrhal inflammatory injection of the mucosa. The jejunum is comparatively free from pathology. There is a progressively more severe diphtheritic enteritis from the beginning of the ileum to the ileo-cecal valve. This shows the general characteristics of a diffuse superficial ulceration with an adherent membranous exudate which can be pulled away, leaving a raw, bleeding submucosa. The Peyer's patches are involved in the general inflammatory process. The large intestine shows a similar but much more severe inflammatory process. There are shreds of mucosa and a typical diphtheritic membrane which here and there has become mechanically torn away, leaving a markedly injected thickened submucosa. The lesion is typical of a severe bacillary dysentery suggesting either an unusually virulent Flexner type or a Shiga type.

Microscopical Findings: Sections through the gastro-intestinal tract present evidence of a definite acute enteritis with ulcerative lesions of the mucosa, which vary in severity at different levels. It is accompanied by a diffuse inflammatory cellular reaction. In places the entire mucosa is eroded and an inflammatory fibrosis of the underlying submucosa has occurred. The submucosa is extremely edematous and diffusely infiltrated by both poly and mononuclear inflammatory cells. A small lymphoid follicle is noted, in which a little adenoma is seen, representing apparently a reparative hyperplasia of the epithelium. The blood vessels are extremely dilated and show many areas of hemorrhage in the submucosa. The lesion is rather chronic in appearance, with a great deal of fibrous tissue proliferation. The



CASE I. Irving M. Acute bacillary dysentery—Flexner type. B. F. H., 1925.

mula of evaporated milk and water, on which he gained satisfactorily until the present illness.

Present Illness: Three weeks ago the baby began having several loose movements every day and appeared to be losing weight. He did not vomit, and the father was uncertain as to whether he had any fever at the onset. Three days before admission he vomited for the first time, and since that time has vomited frequently and had very loose watery stools, so frequently that the father did not know their number. During the trip to the Hospital the child had four small watery movements which were blood streaked.

Physical Examination: The baby is well developed, but poorly nourished. He shows marked dehydration and has a distinct toxic appearance. He seems rather drowsy and the head is held somewhat retracted. There are marked twitchings of the mouth, eyes and extremities, especially of the fingers. Nervous irritability is very marked, the slightest touch

*Case Reports by members of the staff. Compiled by Lawrence W. Smith, Chief of Staff.

most marked lesions are found in the colon, but the small intestine is also involved.

Discussion: This case is of particular interest because of the comparative infrequency of dysentery, especially of a severe enough type to cause death. The disease occurred in this instance in a very young infant and for that reason is of added interest. It showed at autopsy the type of diffuse diphtheritic enterocolitis which one is apt to associate with the Shiga type of bacillary infection. This is a comparatively rare pathological finding in this community now. The enclosed photograph of the gross specimen illustrates the extreme degree of involvement of the entire mucosa with the superficial ulceration and the diphtheritic membrane noted in the protocol.

CASE II. Rosie I. Age 5 years. Hospital No. 4676. Service of Dr. Robert B. Hunt.

Family History: The father and mother are both living and well except that the father is partially incapacitated by an old fracture of one leg. There are six other children, living and well, and there was one miscarriage eight years ago.

Past History: Child was full term and normally delivered. She was breast fed for six months, then put on a whole-milk formula up to about one year, when she went on regular table diet. She had never received cod liver oil until two months ago. She had always seemed well up to the present illness. There has been a marked constipation, however, the bowels moving usually but every two or three days.

Present Illness: Two weeks ago child developed abscesses in both ears, which have been discharging a thin serous fluid since that time. She is brought to the Hospital because of a fever, but was able to walk and did not appear acutely ill. She gave the impression of being more or less apathetic and presented a marked rickets.

Physical Examination: She is generally poorly developed but fairly well nourished. The head shows moderate prominence of the parietal and frontal bosses. The ears are both draining freely a thin, foul-smelling serous fluid. The throat is moderately injected. The teeth appear in average condition. There is moderate enlargement of the cervical lymph nodes. The eyes react normally to light and distance. There is no strabismus nor nystagmus. Chest is symmetrical. The heart and lungs are normal. The abdomen measures 52 cm. at the level of the umbilicus. It is symmetrical but extremely protuberant, tense and tympanitic throughout. There is marked prominence of the superficial veins. It is impossible because of the distention to satisfactorily palpate the abdominal viscera. The extremities show moderate enlargement of the epiphyses and slight bowing of the tibiae. The musculature is very poorly developed, with marked atony. There is a definite rachitic rosary.

Laboratory Findings: The initial laboratory findings were of no diagnostic value. The urine and stools were negative. The blood showed a normal red cell count of 4,392,000, a white cell count of 9,900 and a hemoglobin of 65 per cent. The Wassermann was negative; the intradermal tuberculin was negative.

Progress Notes: The day following admission she became semi-comatose and could be aroused only with difficulty. The abdomen during the course of the next two days became more distended; she became more and more stuporous and her general condition seemed worse, although the temperature fell to normal after

the first 48 hours. There was complete anuria on the fourth day. About 500 cc. of clear, straw-colored urine was obtained by catheterization. She still remained comatose, however, and for this reason a lumbar puncture was performed and 20 cc. of clear fluid under slight pressure was obtained. This showed a cell count of 10, all lymphocytes. The spinal fluid Wassermann was negative. Within 24 hours following lumbar puncture she began to



CASE II. Rosie I.

void voluntarily and her general condition showed definite improvement. Her mental condition cleared, and gradually during the course of two or three days she began to take a normal interest in her surroundings, playing with her toys and showing a definite improvement in her appetite. The ears, however, still continued to drain freely.

7-17-25. During the past two weeks her general condition has steadily improved except that her abdomen still remains very distended and she has marked constipation, requiring daily enemas. A large amount of undigested food is obtained from the colon by these irrigations. In view of this picture, she was put on a typical protein diet consisting of diaphragm muffins, cottage cheese, fat-free milk, scraped beef, prune jelly, bananas and vegetables.

7-27-25. Patient continues to improve. Has shown a gain of 1120 grams. Is now taking four bananas

a day. Colonic irrigations have been stopped and she now has a fairly normal appearing protein stool every other day.

8-18-25. Has shown a further gain in weight of 1400 grams.

9-8-25. She has been up and about the ward for the past week and has shown a persistent improvement. She has presented a very interesting waddling-type of gait which suggested a congenital hip lesion. X-ray examination of the hips was taken and a report of "Bilateral coxa vara, marked," was made.

Discussion: This case on admission presented a certain amount of difficulty in diagnosis. There was an obvious rickets of an unusually marked degree. There was a definite chronic catarrhal bilateral Otitis Media, which was draining freely and which did not seem sufficient to account for the temperature and apathy. On physical examination, there was a slight suggestion of tenderness in the flanks consistent with an inflammatory lesion of the kidneys, but laboratory examination of the urine, ruled out the presence of any pyelitis. The marked abdominal distention and the history of chronic constipation seemed to loom up as the most important factors in the picture. With the development of actual coma accompanied by anuria, the problem of whether a meningeal involvement had occurred was considered. Lumbar puncture suggested a slight increase in the volume of the spinal fluid but no other abnormalities, so that the possibility of a definite meningitis could be ruled out. The peculiar association of complete anuria with these symptoms led to the possibility of some severe primary renal lesion, but examination of a catheter specimen showed no abnormalities of the urine and nephritis could be excluded on that basis.

By exclusion, the diagnosis of Celiac Disease was arrived at. We rarely see Celiac Disease, however, in a sufficiently advanced form to present the central nervous symptoms which are typical and classical of the disease. The rapid improvement following the administration of a protein diet, served as confirmatory evidence of our diagnosis. The etiology of the condition in this particular instance was obscure. It seemed to be caused by a general excess of diet rather than an excess in any one particular element. It did not present the usual picture of chronic intestinal indigestion as the result of excessive amounts of fat, nor of an excess of carbohydrates.

The case presented other points of interest in the congenital lesions of both femora with the production of a bilateral marked coxa vara which was obscured by the presence of a severe rickets. Very probably the etiology of Celiac Disease may be attributed in part to an improperly balanced diet, low in the necessary food substances, and certain of the factors which produce rickets may play an important part in the development of the chronic intestinal indigestion.

Subsequent report: This child has been fol-

lowed through the out-patient clinic of the hospital and has shown a persistent improvement in her general condition. She is under observation in the Orthopedic clinic and is wearing a small abdominal belt and back brace to prevent the weight of the abdomen from producing any further deformity of the promontory of the sacrum which might cause trouble later obstetrically. In such a way, it is hoped the correlation of the Orthopedic and the Medical care of some of these cases may result in the greatest good to the patient.

CASE III. Robert S. Age 17 months. Hospital No. 4705. Service of Dr. Maurice Briggs.

Family History: The father and mother are living and well. There are two other children, who are normal. There have been no miscarriages and there is no known exposure to tuberculosis. The child was a full term, normally delivered baby and was said to have weighed 12½ pounds. He developed normally on bottle feeding and after the seventh month was given fairly generous table diet.

Past History is negative.

Present Illness: Child was taken acutely ill about a week ago with a severe cough and a high fever. He was restless and appeared quite sick. During the first few days he seemed very drowsy and had to be shaken to wake him up. He was seen at home by a physician who made diagnosis of pneumonia. He has had no convulsions. There has been no vomiting and bowel movements have been normal until today, when he had five stools. He has refused food and has only taken fluids with considerable persuasion.

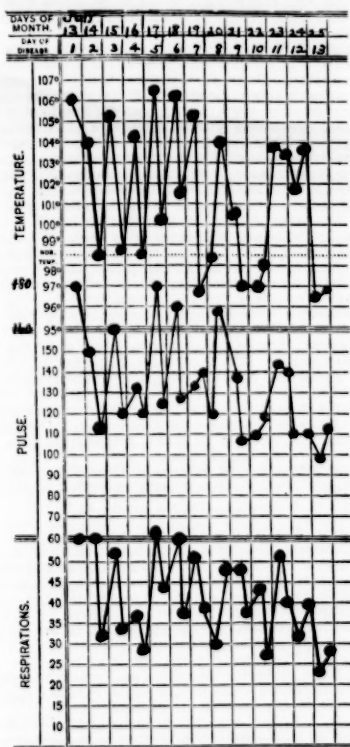
Physical Examination: The child appears acutely ill, with the face flushed and a rapid, shallow respiration with moderate dilatation of the alae nasi. He appears somewhat stuporous. He has a slight, rather dry cough, which occurred several times during the course of examination. The general development is fairly normal, but there is a definite dehydration. There is very little evidence of any rachitic deformities. The head is normal; the eyes, ears, nose and mouth are negative. The chest is symmetrical, normal in contour. The movements of chest wall are increased and there is a lagging of the right side both during inspiration and expiration. The breathing is obviously shallow. There is decreased expansion of the right lung. The breath sounds over the right lung are decreased in intensity and bronchovesicular in character, while on the left side there is a compensatory increase in breath sounds with moist rales. There is definite dullness of the lower half of the right lung with resonance over the left side, but tactile fremitus is present on right side, especially anteriorly. The cardiac impulse is visible in fourth interspace. There is no precordial bulging. The heart is normal; the abdomen negative. The extremities are negative.

Progress Notes:

7-18-25. The patient was obviously acutely ill on admission, with a temperature of 106, pulse 180, respirations 60. During the course of the week his temperature showed a daily variation from 96.5 Fahrenheit to 106.8 Fahrenheit, of a very marked picket-fence type. The pulse and respiration showed a corresponding daily variation. The white count on admission was 16,800, with a differential count of 65 per cent. polynuclears. Blood cultures on admission were negative. The urine showed a moderate degree of albumin, but no other changes. A surgical consultation was held, and, in view of the extreme daily variation in the temperature, it was felt that the process had not become sufficiently localized to war-

rant surgical intervention. Thoracentesis was advised for diagnostic purposes. Five cubic centimeters of straw-colored fluid was obtained, from which cultures were taken. No growth was obtained.

7-25-25. During the past week he has shown a continuation of the extreme variation in temperature, pulse and respiration. The interesting feature is



that when this temperature is normal or subnormal he appears well, has a normal appetite and attempts to sit up and play in his bed. With the rise of temperature in the afternoon, he becomes acutely ill, refuses food and tends to become drowsy and stuporous. The physical examination shows no particular change. There is dullness to flatness in the right lower lobe with corresponding hyper-resonance on the left side. A second thoracentesis was performed, after another surgical consultation, and this time no fluid was obtained. It felt as if the point of the needle hit solid lung tissue. The mother took him home against advice because of his failure to improve.

Discussion: The interest in this case is centered primarily in the temperature chart. Here we have a baby who appears acutely ill and suffering from a definite pneumonia. With the high temperature pulse and respiration he appears drowsy, comatose and acutely ill. Within

a few hours, however, the picture entirely changes clinically; his temperature drops to normal or subnormal and his general condition appears improved; he is rather quiet, hungry and interested in what is going on. This condition is repeated day after day with a daily excursion of nearly 10 degrees in the temperature. Laboratory examination of the blood, urine and even of material from the thoracic cavity yield very little information of value. A diagnosis of Empyema has to be considered but is ruled out on the absence of but minute amounts of clear fluid in the pleural cavity. The history of only 1 week's duration before admission suggested an acute pneumonic process. But the behavior of the child in the hospital left no choice for diagnosis but that of an unresolved pneumonia of a unknown etiology.

Subsequent notes: The case progressed favorably at home and gradually during the course of a few weeks his temperature returned to normal and he presented an ordinary convalescent picture. Eight months later he appeared perfectly well.

CASE IV. Edna G. Aged 16 months. No. 4711.
Service of Dr. Lewis Webb Hill.

Family History: The father and mother are living and well and have three other normal children. There is no history of tuberculosis.

Past History: The baby was full term and normally delivered, weighing 8½ pounds. She was bottle fed from birth. At five months of age she had a bilateral Otitis Media with enlarged cervical lymph nodes. She was in another hospital at this time for two months, but her ears continued to discharge for another two months after her return home. She has been very irregularly fed and received essentially the table diet from the time she could eat. At approximately a year she began to show evidence of an anemia. She had very poor color and lost her appetite. She was referred to another hospital and there received a transfusion, the mother acting as donor. She showed some improvement and was discharged after two months.

Present Illness: There was a short interval following the discharge from the hospital when she appeared better, but for the last two or three months she has been failing and her color has been getting poorer. She is brought to this Hospital because of the pallor, the fact that she eats very poorly and shows no gain in weight.

Physical Examination: The child appears rather acutely sick, with a marked yellowish pallor of the skin. There are numerous minute petechiae all over the body. The nutrition is subnormal, but there is no evidence of any marked loss in weight. The eyes, ears, nose and throat are negative. There is marked pallor of the mucous membranes. She has three lower and two upper incisors. There is a bilateral cervical adenopathy, the glands being pea to bean in size. There is no demonstrable enlargement of the thymus or thyroid. The chest is symmetrical; heart and lungs are negative. The abdomen is prominent; it is asymmetrical, with more marked enlargement of the left side. There is a palpable mass extending from the left costal margin 2 cm. from the midline to a point just below the umbilicus and thence to the iliac crest. There is a definitely palpable notch. This mass presumably represents the spleen. It is extremely firm and has a rounded edge. The liver is not definitely felt and apparently is not

noticeably enlarged. There is some enlargement of the inguinal lymph nodes.

Progress Notes: The most interesting features of this case are related to the blood. The following table presents the more striking findings:

R. B. C.	7-26-25
W. B. C.	3,790,000
Hemoglobin	61,500
Differential:	31%
Polymorphonuclears	23%
Small lymphocytes	57%
Large lymphocytes	12%
Large mononuclears	6%
Eosinophiles	1.5%
Mast cells	.5%
Platelets	60,000

The fragility of the red cells in hypotonic salt solution is normal, beginning at 0.45% sodium chloride, showing the maximum hemolysis at 0.35%, and being complete at 0.20%. The bleeding time is four minutes; the coagulation time five minutes. The Wassermann is negative; intradermal tuberculin reaction is negative. The urine is negative except for the presence of an unusual amount of urates which somewhat discolor the napkins.

7-22-25. During the last week she has maintained her weight but has had a great deal of distention, which is relieved in part by enemata. She vomits frequently with no apparent cause. Her temperature shows a tendency to run between 101 and 102, although occasionally dropping nearly to normal.

7-29-25. There has been a drop in her hemoglobin and red cell count since admission, with an increase in the white cell count, which shows a high percentage of lymphocytes. This puts the case into that group of unexplained anemias with splenomegaly. In view of the progressive anemia and the fact that during the second week of her hospital stay there was a rather marked loss in weight accompanied by a complete loss in appetite, it was thought advisable to transfuse. According to the history, the mother had previously been used as a donor. Direct agglutination, however, was performed and the mother's blood appeared compatible. The baby was given 250 cc. citrated blood into the jugular vein. Shortly after transfusion she showed a typical reaction, with a temperature rising to 105. During the next four hours the temperature rose further to 107 and then started to come down. The pulse remained steady and of good volume at about 150. The respirations showed an immediate rise paralleling the temperature curve, but began to fall within two hours after transfusion. She appeared to be doing satisfactorily when suddenly she went into unexplained shock and died. An autopsy was secured and the following findings of interest are summarized.

ABSTRACT OF AUTOPSY PROTOCOL

Body: Is that of a fairly well developed, poorly nourished female infant showing obvious rickets. There is moderate post-mortem lividity. The pupils are regular and equal. The anterior fontanel is palpable. There is general lymph adenopathy, particularly of the cervical and inguinal regions. The abdomen is prominent, particularly on the left side, due to splenic enlargement.

Peritoneal Cavity: Contains about 10 cc. of rather thick, straw-colored fluid. The appendix is normal. There is an extraordinary degree of hyperplasia of the mesenteric and retroperitoneal lymph nodes. The diaphragm reaches to the fourth rib on the right and the fifth interspace on the left.

Pleural Cavities: Contain no free fluid. There are several adhesions at the base of the left lung of recent origin.

Pericardial Cavity: Is not enlarged.

Heart: Appears normal. It weighs 60 grams. There are no valvular defects or congenital anomalies.

Lungs: Show moderate congestion and edema with some definite consolidation at the left base.

Liver: Is moderately enlarged. It is very pale in color. It weighs 560 grams. The capsule is smooth and glistening. There is no gross evidence of bile stasis. There is considerable fatty metamorphosis.

Spleen: Weighs 375 grams. Its capsule shows several areas of thickening, representing an old chronic perisplinitis. Some of these are firmly adherent to the abdominal wall laterally. On section the capsular thickening appears even more prominent. The follicles are barely visible as minute punctate grayish spots. They appear reduced in number and size. There is a marked fibrosis of the spleen, giving a sense of resistance unusual to that organ. There is no evidence of splenic vein thrombosis.

Pancreas: Is very pale whitish yellow in color, but otherwise normal in position, size and consistency. There are numerous very red, soft lymph nodes adherent to the pancreas and extending along the splenic vein as far as the hilus. These on section show no evidence of lymphoid follicle formation.

Gastro-Intestinal Tract: Is negative.

Adrenals: Appear small and similarly pale as was noted in relation to the pancreas.

Kidneys: Are of about normal size, weighing 140 grams together. Their capsules strip readily. There are numerous small subcapsular hemorrhages of petechial character. On section these are also noted in the kidney tissue and particularly in the pelvic fat. Many of these can be seen through the pelvic mucosa, but there is no frank hemorrhage into the pelves. Ureters appear negative.

Bone Marrow: Is extremely hyperplastic in appearance. No other detail could be made out grossly.

MICROSCOPICAL EXAMINATION

Heart: Section through the heart muscle shows blood vessels filled with nucleated cells which under high power are found to be both leucocytes and nucleated red cells. There are a few areas of apparent hydropic infiltration of the myocardium and some perivascular cellular infiltration. There is a sclerosed area containing what appears to be an Aschoff body in the papillary muscle.

Lungs: The lungs are apparently of little interest. They show moderate congestion and marked increase in the nucleated cells in the blood vessels, with no evidence of any pneumonic process.

Liver: Under low power suggests a leukemic process as it is diffusely infiltrated by nucleated cells of the hematopoietic system. These occur in a few areas as islands such as one seen in the foetal liver, but for the most part it seems to be a much more diffuse infiltration, and under low power suggests strongly a leukemia. This is further supported by distension of the sinuses with the nucleated cells of both the red and white series. There is no evidence of bile stasis or connective tissue increase.

Spleen: The spleen is also the seat of active hematopoiesis with a few focal areas of foetal blood cells. There is a diffuse infiltration of the pulp by these early nucleated blood cells. Lymph follicles are practically negligible in appearance, most of them being represented by a very demonstrable perivascular collar of lymphocytes. There is a marked congestion of the spleen and a diffuse fibrosis.

Pancreas: Is of no particular pathological interest.

Lymph Nodes: The lymph nodes vary somewhat in the degree of hematopoiesis which they present, those which grossly showed areas of reddening being the ones most intimately concerned in the blood formation. There is a diffuse lymphoid hyperplasia which is not restricted to the follicles and which almost obscures the normal architectural outline of

the gland. The peripheral sinuses, and, in some instances, the pericapsular tissues, are also involved in the active hematopoiesis. Occasional megakaryocytes are found in these areas. No evidence of agglutination as a potential factor in the death of the baby is noted. This same diffuse infiltration of the sinuses and pulp by the undifferentiated nucleated cells is found all through the various lymph nodes.

Kidneys: Under low power also suggest a leukemic infiltration by the same undifferentiated blood cells. In addition the area in the pelvis which grossly was thought to be hemorrhage is found to be simply the result of vicarious hematopoiesis with the formation of typical bone marrow containing islands of red and white cell formation as well as sinuses packed with an adult type of cell.

Adrenals: The adrenals have normal appearing cortices microscopically, but the medulla shows rather diffuse hemorrhage with several areas of focal collections of these same undifferentiated cells, some of them definitely with a perivascular distribution and suggesting potential hematopoiesis.

Bone Marrow: The same type of active blood cell formation is found going on in the bone marrow, characterized particularly by the presence of undifferentiated mononuclear cells.

Discussion: The discussion of this case shows the difficulty of diagnosis of certain of the anemias, especially those found in children. A preliminary tentative diagnosis of Pseudo Leukemic Anemia was made in this particular instance on admission because of the generalized lymph adenopathy, splenomegaly, and a secondary anemia with a count of approximately 20,000. This white count was not sufficient to make a definite diagnosis of leukemia and yet was too high to be strictly classified in the ordinary secondary anemias. Certain of the more obvious types of anemia could be ruled out in this instance with a fair degree of assurance. In the first place, there was no evidence of the ordinary chlorotic type of alimentary anemia, as the color index was over one (1). Furthermore, an anemia which has persisted for as long as six months, even after transfusion and regulation of the diet, could not be logically considered in the light of a secondary anemia due to a deficiency of iron.

In the second place, the question of Congenital Hemolytic Anemia is fairly readily disposed of. There is no history of other cases of anemia in the family. This in itself is of course of little significance, but as an additional factor has some importance. The normal fragility of the red cells in itself practically rules out this possibility. Incidentally there was a very slight increase in the reticulated red cell count and the serum showed none of the characteristic evidence of hemolysis on dilution.

The possibility of an aplastic anemia is equally remote. In spite of the progressive and rapid development of the anemia, there is obvious evidence of a bone marrow activity as seen by the increase in the white cell count, although it is perfectly true that most of this increase is found in the lymphocytes. In aplastic anemia, however, there is a corresponding reduction in the number of cells of myeloid origin and in this

instance there appears to be actual, although relatively slight, increase.

In the next place, the so-called Von Jaksch's anemia, has to be considered. There appears to be relatively little resemblance to the typical blood picture of this disease in this particular case. There is almost no increase in the nucleated red cell count although occasional normoblasts are found. The diminution in platelets may also be considered as of some value in establishing its differential diagnosis. The rapidity of the course of the disease is quite consistent with the more severe cases and the extraordinary degree of splenic enlargement is evidence in its favor.

The picture again, is unlike the picture ordinarily seen in so-called Banti's disease. In this instance we would expect a more typical picture of secondary anemia; there would not be the diffuse generalized adenopathy and the spleen typically should not show such marked enlargement. Furthermore, the course of the disease should have been a much more chronic one to have produced the degree of change found in this instance.

That brings us to the consideration of the Leukemias and their related conditions. It seems to me that our classification of the diseases of the lymphoid system is exceedingly unsatisfactory. This is evidenced by the numerous terms in the literature. Here we have a case which presents many of the characteristic features of a leukemia of the lymphatic type—diffuse glandular enlargement, splenomegaly—a moderate anemia and a leucocytosis with a preponderance of lymphocytes. It is true that the white count on admission is not particularly high and for that reason, the suggestion that it represented a case of so-called aleukemic leukemia was advanced. If we think of such a condition as merely representing one phase of leukemia, perhaps such a term is justified, but to attempt to make a separate classification on such slender evidence seems lacking in logic. Furthermore, the course of the disease in this instance suggested that it actually did belong to the leukemic group. But the blood picture presented certain minutiae which made one feel very uncertain as to the accuracy of such a diagnosis.

The autopsy findings in this case were of exceedingly great interest. They might be interpreted differently by pathologists holding various theories concerning hematology. I personally have always held the view that there must be a tumor arising from the primitive blood cell, the so-called hematoblast or angioblast, just as we can have tumors arising from the more definitely differentiated cell—myelocyte or lymphocyte. The finding of typical islands of hematopoiesis in the pelvic fat of the kidney, as well as similar hematopoiesis in the liver, spleen and lymph nodes, is very strong

evidence in favor of such a possibility. I realize that in presenting such a point of view I am treading on extremely dangerous ground, but it seems to me that the weight of evidence in this instance is sufficient to support such a hypothesis and that the burden of proof lies upon those who would dispute the possibility of such a condition. As supplementary evidence against the diagnosis of leukemia is the recognized fact that chronic lymphatic leukemia in infancy is so unusual in itself to throw doubt upon the diagnosis. This case is being presented primarily with the object of stimulating interest and discussion in this poorly understood group of infantile anemias, rather than from any positive dogmatic standpoint. For this reason, it seems to be a case presenting a number of unusual features of sufficient interest to warrant its inclusion in this series.

CASE V. Josephine C. Age 2 years. Hospital No. 4872. Service of Dr. Paul Withington.

Family History: The father died of pneumonia eight months ago. The mother, 22, is living and well. One other child three years of age. The family history otherwise is negative.

Past History: Child was full term and normally delivered, weighing 7 pounds at birth. She was nursed for two months and then weaned. She has been fed irregularly on more or less of a mixed table diet but has been apparently normal in her development up to the present illness.

Present Illness: About three weeks before admission, the mother noticed a slight icteric tinge to the baby's eyes. Child was treated at home by a physician, but the jaundice increased steadily in severity and the stools became typically clay-colored; she appeared to be getting progressively weaker so that she was unable to walk. She has been on a rational diet under medical supervision but has steadily become sicker. Two days ago she began vomiting two or three times a day. This has persisted since then.

Physical Examination: The child is well developed and nourished. She appears extremely toxic and semi-comatose. There is very striking generalized icterus. The head is negative. The eyes are intensely jaundiced and the pupils react rather sluggishly to light. Ears, eyes, nose, mouth and throat appear within normal limits. There is no cervical or general adenopathy. The chest is symmetrical. There appears to be a rather definite hyperpnea; the lungs, however, are clear throughout. The heart is negative; abdomen is tense and tympanitic. The liver and spleen cannot be felt. The clinical picture on admission suggests a rather marked case of catarrhal jaundice.

Progress Notes: Child was moderately dehydrated and received 750 cubic centimeters of saline by hypodermoclysis. Approximately six hours after admission she began to have an eclamptic type of convulsions with intense twitching of the face and eyes as well as of the extremities. There was an odor to the breath which was difficult to describe, but in which one could detect a suggestion of both acetone and nitrogenous products such as are typical of uremia. The urine contained a large trace of bile and acetone. Sedatives controlled the convulsions for several hours, but she subsequently became spastic and completely comatose. Ten per cent. glucose was infused with insulin hypodermically to assist in its utilization. Terminally an almost continuous clonic convulsion developed with rapid and marked twitch-

ings of the facial muscles and extremities and a bloody froth exuding from the mouth and nostrils.

Discussion: The case presented a number of features which differentiated it from the simple picture of catarrhal jaundice. Jaundice in itself raises of course the question of differential diagnosis, as so many etiological factors have to be considered in its production. In this case the temperature was not greatly elevated,—100 on admission and did not become elevated until terminally, when it rose rapidly to 104. The long history of three weeks' persistent progressive jaundice is somewhat unusual in childhood, particularly when accompanied by obvious progressive weakness and general collapse. The lesions which occur to one at once are those of a nature to produce obstruction to the outflow of the bile. In children this is most commonly associated with a simple catarrhal inflammation of the duodenum and the ampulla of Vater with a varying degree of involvement of the common bile duct. The course is relatively rapid; the symptoms relatively mild and there is no recognized mortality.

Obstruction of the duct by tumor is extremely uncommon in children, unlike the adult in whom the possibility of carcinoma of the head of the pancreas or of the pylorus has to be considered. Occasional tumors of retroperitoneal origin are an exception to this statement but are so unusual as to be almost negligible. In many respects the picture, however, is more compatible with such a lesion than with one of a subacute inflammatory nature. The possibility of the pigmentation being hematogenous rather than hepatogenous is readily ruled out by the cardinal symptoms of biliary obstruction; clay-colored stools, bile-stained urine, and a true jaundice involving not only the sclera and mucous membranes, but the tissues generally.

Parasitic disease can also be practically ruled out. The rare cases of echinococcus cyst or ascariis infection are so rare here as to be disregarded. This leaves very little except primary lesions of the bile ducts to be considered. In new born babies, it is not infrequent to encounter such severe cases of jaundice terminating fatally as the result of a congenital obstruction or absence of the bile ducts. In a child who has lived for two years and shown a normal development such a possibility seems very remote. The toxic picture might be the result solely of the absorption of bile pigment by the central nervous system as this is known to exert a very marked effect. On the other hand, the almost eclamptic-like convulsions and coma suggest something more than mere obstruction and bile absorption. The possibility of an acute toxic lesion with extensive destruction of the liver tissue of the nature of acute yellow atrophy is a condition not to be disregarded in

such a differential diagnosis. There are certain things in support of such a hypothesis.

In the first place, both percussion and palpation of the hepatic region suggests a diminution in the size of the liver; the progressive nature of the lesion also argues strongly in favor of such a widespread destruction and the severe toxic picture certainly is more compatible with such a widespread destruction than with a simple bile pigment absorption. By exclusion the diagnosis comes down to that of acute yellow atrophy of an unknown etiology, very probably related initially to a simple catarrhal jaundice. We were fortunately able to secure a post-mortem and the following protocol brings out the essential pathology.

Anatomical Diagnoses:

- Congenital anomaly of the bile duct
- Secondary chronic cholecystitis
- Question of acute yellow atrophy of liver
- Diffuse jaundice
- Splenomegaly with lymphoid hyperplasia
- Chronic gastro-enterocolitis

Microscopical Diagnoses:

- Acute yellow atrophy
- Jaundice
- Catarrhal enterocolitis

Body: Is that of a well developed and well nourished female child approximately two years of age. The most striking feature is a very marked jaundice. There are no other external lesions except the scars of several subcutaneous saline infusions.

Head: The head is of normal contour. Pupils are regular and equal. There is marked yellowing of the sclerae. There is a frothy discharge from the nose and mouth. The ears are negative. There is no generalized adenopathy.

Peritoneal Cavity: Contains no free fluid and no adhesions. The appendix is unusually long, measuring 11 cm., and is twisted on itself. It is retrocecal in position. Mesenteric lymph nodes are slightly enlarged and moderately injected. The diaphragm is normal in its attachments.

Gastro-Intestinal Tract: The stomach is distended and shows very marked edematous thickening of its walls. The mucosa is pale in color and shows marked increase in the mucus which is adherent to the surface. There are no foci of hemorrhage. The normal rugae are lacking.

Duodenum: Presents a chronic inflammatory process with moderate edema and thickening of the mucosa and submucosa. There is no acute process present with ulceration or hemorrhage. The small intestine shows similar edema but is otherwise negative. There is no prominence of the lymphoid tissues in the terminal ileum. The large intestine is distended with clay-colored fecal material which grows progressively whiter towards the rectum. In the small intestine there is some slight bile staining of the contents, which consist chiefly of mucus and cellular detritus.

Liver: The liver is small and extremely flabby in consistency. The capsule is wrinkled. The liver is very diffusely mottled yellowish red in color. On section it almost suggests an acute yellow atrophy with many foci of necrosis and yellowish fatty degeneration.

Bile Ducts: The point of interest in the pathology centers about the obstructive jaundice. The gall bladder itself appears essentially normal. It is some-

what larger than might be expected and its wall is slightly thickened. On section, however, it is found to be filled with a pale, almost colorless, stringy mucus material containing practically no bile pigment. On dissecting the cystic and common ducts it is found that there is a definite anomaly in their structure. The hepatic duct bifurcates at a point only one-half a centimeter above the cystic duct. The common duct is definitely obstructed with a stricture extending for nearly a centimeter below this point. This suggests a congenital lesion with an incomplete atresia complicated by secondary inflammatory changes. In addition there is very marked lymph node hyperplasia with three large nodes compressing the bile duct laterally.

Spleen: Is about twice its normal size. Its capsule is tense. On section there is an extraordinary degree of lymphoid hyperplasia, evidenced by the marked prominence of the follicles, which are apparently increased, both in size and number. The pulp is congested.

Pancreas: No changes are noted in the pancreas, on careful dissection of the Duct of Wirsung. Sections are taken through both the head and tail to insure finding any supplementary microscopic pathology.

Adrenals: Are negative.

Kidneys: The kidneys are normal in size. The left one shows a very marked depression where the enlarged spleen has rested upon it. On section the cortices and pelves bear their normal relationship to one another and there is no evidence of any acute inflammatory change.

Bladder: Is distended, reaching 1 cm. below the umbilicus. It appears otherwise normal.

Heart and Lungs: Are examined by an incision through the diaphragm. Other than hypostatic congestion at the bases and dependent portions of the lungs no pathology is found in the thoracic cavity.

MICROSCOPICAL EXAMINATION

Heart: Sections through the heart show no pathological changes of sufficient degree to warrant description.

Lungs: Are also negative microscopically.

Liver: Sections through the liver show a typical acute yellow atrophy with almost complete destruction of the liver parenchyma. There is obvious reparative process in evidence, with marked proliferation of the bile duct epithelium and a diffuse endothelial mononuclear cellular infiltration. Many atypical mitotic figures are seen representing liver cell regeneration. What liver cells cytoplasm is visible is extensively vacuolated by fat droplets. There is diffuse hemorrhage. The lesion has passed the initial acute stage of polynuclear infiltration and might be termed as hyaline.

Spleen: Sections through the spleen present marked congestion and endothelial hyperplasia of the cells lining the sinuses. There is marked lymphoid activity also with very prominent germinal centers.

Pancreas: Microscopically is negative. The islands appear unusually prominent and numerous.

Mesenteric Lymph Nodes: Show a diffuse subacute lymphadenitis.

Kidneys: Are characterized chiefly by an extreme degree of congestion with numerous petechial hemorrhages and marked fatty degeneration of the tubular epithelium, particularly in the medullary portion. The glomeruli appear essentially negative aside from the congestion.

Adrenals: Are within normal limits.

Gastro-Intestinal Tract: Shows no pathology beyond a moderate catarrhal condition of the mucosa.

**Case Records
of the
Massachusetts General Hospital**

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN
WEEKLY CLINICO-PATHOLOGICAL EXERCISES

EDITED BY

RICHARD C. CABOT, M.D., AND HUGH CABOT, M.D.
F. M. PAINTER, A.B., ASSISTANT EDITOR

CASE 12241

A CASE WITH GENERAL EDEMA

MEDICAL DEPARTMENT

An eleven-year-old schoolboy entered March 31, four years and a half before his final admission. He had pertussis at ten months, measles at three years, and adenectomy at four. He was considered a healthy child until his seventh year, when he began having three or four attacks of nasopharyngitis every winter lasting three or four days. The winter before admission the attacks became more frequent and severe. There was no history of sore throat.

In April a year before admission his face became swollen, and later his feet and legs, and he urinated once or oftener at night. The edema increased until it became extreme. After ten days' rest in bed under medical care the edema cleared up and he was thought to be well until two weeks before admission, when the edema of the face recurred.

Examination showed a fairly well developed and nourished boy with no appearance of illness. The sclerae were slightly injected. The left ear drum was slightly red. The gums and fauces were pale. There were bean sized axillary and inguinal glands. The sternum was prominent above and depressed below. The apex impulse of the heart was 7.5 cm. from midsternum, 5 cm. inside the nipple line, 2 cm. inside the left border of percussion. The right border was 2.5 cm. from midsternum. The rhythm and force were good. There was a systolic rumble heard over the entire precordia, best at the apex. The pulmonic second sound was greater than the aortic second. There was a fairly constant clicking r  le at the angle of the right scapula. D'Espine's sign was present to the fifth dorsal vertebra. The abdomen showed spasm (resistance) on deep palpation. The liver was palpable at the costal margin.

The urine was normal in amount, alkaline at two of six examinations, specific gravity 1.010 to 1.012, a large trace of albumin at all examinations, many pus cells at all, occasional red blood cells once. Culture of a catheter specimen showed staphylococcus. Blood examination showed 10,100 leucocytes, 65 per cent. polynuclears, hemoglobin 70 per cent. The non-

protein nitrogen was 31.1 to 46.5 mgm., the blood sugar 0.09 per cent.

In X-rays of the genito-urinary tract the kidney outlines were not visible on either side. The plates showed no definite evidence of stone.

A urological consultant reported, "The amount of albumin and the absence of blood are not the ordinary findings of stone. I think stone is a very improbable diagnosis. Whether or not there is renal abnormality or stone can be determined only by cystoscopy. I should expect to find a bilateral condition. I should advise cystoscopy if it can be done without general anesthesia, unless you are willing to advise anesthesia."

The temperature was 98° to 100.7°, the pulse 122 to 67, the respiration normal.

On a salt free low protein diet with unlimited fluids and calories the patient improved. April 9 the kidney function and non-protein nitrogen were normal and he was able to take meats. April 9 he was discharged with orders for limited salt and urotropin ten grains three times a day.

He was not seen again for four years and a half. Soon after leaving the hospital he had hematuria for a day or two. He had tonsillitis six or eight times every winter, and frequent severe colds followed half the time by sore throat and cough. He had occasional slight nosebleeds. He continued to urinate once or twice at night and four to six times a day.

October 24, four and a half years after his discharge, he re  tered complaining of running right ear and swelling of the neck.

Five weeks before the readmission he had a severe cold with cough and sore throat. Two weeks later his left ankle became swollen. He grew so weak that a week after the onset he went to bed. He was nauseated and vomited everything taken except small sips of water. Several times the vomitus had contained blood clots thought to be blood swallowed from the nosebleeds. He passed several black tarry stools in the week before admission. The week before he came to the hospital he had a profuse nosebleed lasting an hour, and during the week he had two slight ones. Five days before admission his neck began to swell. Two days before admission his right ear began to discharge a little purulent fluid. His weight had fallen from 107 to 89 in five weeks.

Examination showed an anemic looking, emaciated, flat chested boy of sixteen with ammonia  l breath, a discharging right ear, and marked indurative edema over the mastoid, the neck and the side of the face. There was slight swelling below the left ear. The skin was dry, with a faint brownish fading rash scattered over the arms and trunk. There was an excoriation below the right knee; dry and scaly. There was a small red spot on the right conjunctiva, possibly petechia. There was slight

discharge from the eyes. The teeth were covered with sordes. The mouth and lips were dry. The tongue showed tremor. The tonsils were enlarged. Pus was expressed from Stenson's duct. The lungs were clear. The apex impulse of the heart was seen and felt in the fifth space $9\frac{1}{2}$ cm. to the left of midsternum, corresponding with the left border of dullness, 2 cm. outside the midclavicular line. There was no other enlargement to percussion. A systolic murmur was heard at the apex and the base. The blood pressure was 150/60 to 145/70. The abdomen was sunken. The right knee-jerk was slightly less active than the left. There was slight edema of the right ankle and slight enlargement of the right ankle joint. There was bilateral pseudoclonus, more on the right. The pupils were normal. The fundus of the left eye showed small moderately old hemorrhage with some exudate.

The urinary output was 43 to 37 ounces, plus 26 ounces by catheterization October 25. The urine was slightly cloudy, specific gravity 1.014 to 1.015, a large trace of albumin at all of three examinations. The sediment showed 25 to 40 leucocytes per high power field at two examinations, 2 at the third, 3-20 red cells at all. Renal function zero. Blood examination showed 26,100 to 19,100 leucocytes, 96 per cent. polynuclears, 1,020,000 reds and hemoglobin 35 to 30 per cent. before transfusion, 1,312,000 reds and 35 to 40 per cent. hemoglobin after transfusion, moderate anisocytosis and poikilocytosis, platelets slightly reduced in one of two smears, no marked achromia but slight central achromia in one smear, none in the other, a few atypical leucocytes in one, 3 per cent. reticulated cells. Bleeding time 4 minutes. Wassermann negative. Non-protein nitrogen 322 mgm. October 23, 300 mgm. October 26, 285 mgm. October 27. Two blood cultures taken October 23 showed no growth. Culture from the right auditory canal showed a moderate growth of staphylococcus aureus. Culture from the right Stenson's duct showed Gram-negative bacilli and staphylococcus aureus. The uric acid was 19.4 mgm., creatinin 8.75 mgm., sugar 178 mgm.

October 24 an ear consultant reported, "Chronic ears with furunculosis of the right canal." A surgical consultant made a diagnosis of parotitis and cellulitis.

The temperature was 100.1° to 101.5° rectal, the pulse 110 to 100, the respiration 14 to 28.

The record notes that this was the fourth consecutive similar case thrown into an acute condition by a severe upper respiratory infection.

Subpectorals and taps were given, and especial care was given to the mouth. The patient was in a dangerous condition. October 24 incision and drainage of the right parotid gland was done under local anesthesia. No definite pus was found. Serum from the incision showed on culture a moderate growth of staphy-

lococcus aureus. The rash observed at entrance was more evident. October 25 two cultures of pus from the parotid duct showed a moderate growth of Gram-negative bacilli, streptococci and staphylococci. October 25 transfusion of 500 c.c. of blood was done. October 26 two cultures from the palate and one from under the anterior portion of the tongue showed a profuse growth of staphylococcus aureus and some Gram-negative bacilli and streptococci.

October 26 Dr. Edwin H. Place was called in consultation. He believed the skin changes were not due to scarlet fever, though he thought this diagnosis could not be excluded absolutely. He also believed the patient did not have diphtheria or other acute infectious disease.

That day tracheotomy was done under novocain. During the night and the following day the swelling increased with great rapidity. The tongue pressed against the roof of the mouth, the eyes were swollen shut, the head and face were almost twice the natural size. The patient became clouded mentally and tried continually to pick at the tracheotomy tube. Considerable morphia given in small repeated doses was required to control him. Shortly before his death, October 27, two blood cultures showed streptococcus hemolyticus.

DISCUSSION

BY RICHARD C. CABOT, M.D.

NOTES ON THE HISTORY

Of course with a history like this nephritis is what we should think of. There would be very few other things that would not show additional symptoms. We could get an edema of this kind from various skin lesions, from insect bites and the so-called angioneurotic edema and from trichinosis. But ordinarily there would be other symptoms. When we take edema alone we ordinarily call it nephritis or look for that when we come to physical examination.

NOTES ON THE PHYSICAL EXAMINATION

"The sternum was prominent above and depressed below" has no special significance. It may be due to rickets, but often we cannot find out what it is due to.

At his age the pulmonic second sound should be greater than the aortic second.

We ought to speculate now as to what diagnosis they made at the time of his discharge. I see good reason to believe that he had some type of nephritis. I do not see why so much stress is given to the possibility of stone. He had leucocytes in his urine, it is true, but that is no evidence of stone, and I do not really see why it should have been so much considered. Whether it was the infectious type of nephritis, a suppurative type, I do not know, but I should

think by his general edema that it was not, but that the glomeruli were involved.

DR. RICHARDSON: There was no pain?

DR. CABOT: No, he had no pain. So I should suppose that at this time he had a glomerulonephritis. That râle at the base of the chest on one side is of no importance, I should think. He had undoubtedly edema in his lungs as well as in his subcutaneous tissue. That is probably the cause of the râle. His glands are of no importance. There is nothing abnormal in his heart. The presence of such a systolic murmur as that is of no importance in itself when there is no other abnormality, and there is none here. So I should say he had an acute glomerular nephritis and apparently recovered from it. But that does not prove that it left nothing behind.

MISS PAINTER: The hospital diagnosis was infectious nephritis.

DR. CABOT: That then was the diagnosis when he left, and he was not seen again for three or four years. It is curious that no one has taken out his tonsils. I do not see why.

Tarry stools too may have come from his nosebleeds.

I take it that the right ear is the one that he had had trouble with the previous October.

In this second illness the prominent thing is his nosebleeds, which in a child, in the absence of traumatism, are not common and are often quite severe, sometimes with acute endocarditis, sometimes with a chronic nephritis.

What the swelling of his neck is due to I do not know. I have no guess, in the absence of any tenderness or pain, which are not mentioned.

This heart examination is quite different from what we have had before, and seems to suggest an enlargement of the heart.

We have to remember that this boy is sixteen, an age at which we do not often see systolic pressures as high as that, although in adults they would not mean much. Still his diastolic is always low. I am not sure yet, therefore, as to the significance of this blood pressure.

Being "pseudo"-clonus of course this means nothing.

This physical examination makes us think of nephritis, the last fact—his retinitis—as much as any, also the suggestion in his blood pressure, the apparent enlargement of the heart, the apparent anemia and the nosebleeds. With that we have an acute otitis media—or chronic otitis media—on the left, with some mastoid involvement, and that may have precipitated the present attack of uremia, just as it often starts up the symptoms of diabetes.

There were only three examinations so we have not much evidence as to fixation of urinary gravity here.

The polynuclears were presumably due to the mastoid trouble which we have referred to already.

The non-protein nitrogen figure—322 mgm.—is enormous, but still it is possible. I do not remember seeing a higher one than that. All the figures are enormously high and strongly confirmatory of our previous diagnosis. The uric acid is greatly increased, the creatinin five or six times too high.

The tracheotomy was done I suppose for edema of the glottis.

DIFFERENTIAL DIAGNOSIS

Tracing the history through it seems to me we have to say: four years before he had a kidney infection which damaged his kidneys and still he got along with it for four years, until he got an acute infection quite widely generalized—parotids, mastoid, presumably glossitis—in which the organism we hear most of is staphylococcus, an organism which hits the kidney very hard too and may well have been present there. Then we get this edema of the glottis for which the tracheotomy is done, I suppose, and finally a streptococcus hemolyticus infection on top of whatever infection and uremia he had before.

Now what should his kidneys show? I should suppose they would show a chronic glomerular nephritis. There may be some acute process with it, because he has a staphylococcus infection which might go anywhere, which is prone to hit the kidney. I do not believe that is the whole thing. I do not believe he could get so high a non-protein nitrogen or changes in his blood pressure and heart unless there were changes in the glomeruli too. So I assume this is chronic nephritis, presumably glomerular, possibly acute suppurative nephritis also. I think the evidences are of acute septicemia both streptococcus and staphylococcus, and I think it is possible that there will be abscesses besides those already shown, for instance in the brain, the lung, the myocardium. All those are possible. The heart should be somewhat enlarged if our record is correct.

A PHYSICIAN: Isn't it possible that the last attack was an acute rheumatic manifestation and that the rash was possibly an associated rheumatic manifestation, and that the throat was an associated manifestation, with edema? His heart seems to have been enlarged, and perhaps it was superimposed acute endocarditis.

DR. CABOT: It seems to me that two things have been suggested there,—rheumatic disease and streptococcus disease. I think it has been pretty well shown that rheumatism is not due to any streptococcus. Nowadays we do not think so much of Rosenow's finding streptococci as we did when he first found them with rheumatism, as we know that he finds them in so many other places. I believe now that we do not know anything about the organism of rheumatism and cannot make the diagnosis unless we find joint symptoms.

Can we say streptococcus disease? I do not see how we can rule that out. He certainly had it at the end, and may have had it sooner. His skin lesions I cannot identify either with rheumatism, where one gets subcutaneous hemorrhages, and also erythema nodosum, or with what we get in streptococcus disease. Did you see anything in the skin when it came to you, Dr. Richardson?

DR. RICHARDSON: No, nothing definite. The hands and forearms showed a slight tan.

DR. CABOT: I fear we shall never know what this skin lesion was.

MISS PAINTER: There is a skin consultation here. It says "the skin rash is probably toxic".

DR. CABOT: In other words they do not think it was due to any infection. I had no doubt, in view of the culture, that he had streptococcus infection, but I do not know how to connect it with the skin lesion.

DR. YOUNG: I think that hematuria is interesting. In checking up these cases two or three years ago I found a number of cases where hematuria was an early symptom. Later there was a nephritis and in between there was infection, and in two or three cases I got what was apparently the same organism out of the urine. I wondered whether if they got at those sources of infection it might not at least have slowed down the process.

DR. CABOT: Do you agree that we cannot suppose this nephritis to have been wholly infectious?

DR. YOUNG: You mean infection in the kidney? I agree with that.

DR. CABOT: The glomeruli have to be in it as I see it; it cannot be what Dr. Richardson calls suppurative nephritis, the thing that gives us big abscesses.

DR. YOUNG: No, I do not think it is that. I think the infection is at a distance and the effect on the kidney is a secondary poisoning.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Chronic nephritis and uremia.
Acute bilateral parotitis.
Transfusion.

DR. RICHARD C. CABOT'S DIAGNOSIS

Chronic glomerulonephritis.
Acute nephritis?
Septicemia, staphylococcus and streptococcus.
Hypertrophy and dilatation of the heart.

ANATOMICAL DIAGNOSIS

1. Primary fatal lesion

Chronic glomerulonephritis.

2. Secondary or terminal lesions

Hypertrophy and dilatation of the heart.
Three foci of septic pneumonia with purulent softening, right lung.
Soft hyperplastic spleen.

3. Historical landmarks

Small chronic ulcer of the duodenum.
Operation wounds.

DR. RICHARDSON: There was the tracheotomy wound in the neck. On the right side of the face just above the angle of the jaw there was a short operation wound. The region was somewhat boggy and swollen.

In the small intestine at a point one centimeter below the pylorus there was a small chronic ulcer. He had a history, didn't he, of tarry stools?

DR. CABOT: Yes, he did.

DR. RICHARDSON: The mesenteric, retroperitoneal and bronchial glands were negative. The lungs showed slight edema, and in the substance of the lower lobe of the right lung there were three small masses of septic pneumonia the central portions of which were softened and purulent.

The heart weighed 375 grams. That is considerably enlarged. Myocardium and valves frankly negative.

The spleen weighed 225 grams, slightly enlarged, and mushy.

The kidneys weighed 155 grams combined. Those of course are very small kidneys. The tissue was tough, the markings indistinct. Some of the glomeruli were large, lobulated, and the capillaries packed with cells. A case then of chronic glomerulonephritis.

We did not take a culture from the heart blood.

DR. CABOT: They had it before death.

Do you get a great deal of valuable information from the fact whether the capsules strip?

DR. RICHARDSON: The development of adhesions means the development of fibrous tissue and is usually associated with fibrosis of the kidney. The stripping of the capsule shows the character of the surface of the kidney, i. e. in nephritis as to whether the surface is granular or not.

DR. CABOT: Suppose you did not take the capsule off, could you get about the same information in other ways?

DR. RICHARDSON: There are other factors of course that indicate nephritis.

DR. CABOT: Of course it would be a terrible heresy not to take it off, but I wondered.

CASE 12242

A CASE OF ANEMIA WITH UNUSUAL ROENTGENOLOGICAL FINDINGS

MEDICAL AND ROENTGENOLOGICAL DEPARTMENTS

AN Italian twenty-six years old entered for the first time fourteen years before his second admission. He gave a history of gonorrhea six years and again two years before that admission,

the second attack still uncured. From the same exposure he had chancre lasting four weeks. A month before admission he had an eruption on the skin, sore mouth and falling hair.

Examination showed deep purplish macules on the skin, especially on the lower parts of the trunk. There were ulcerated gray mucous patches on the soft palate and uvula. The hair was thin. He was given one dose of salvarsan 0.6 gm. intravenously and discharged to the Out-Patient Department.

February 25, fourteen years later, he came to the Out-Patient Department complaining of constipation of six months' duration, weakness of the legs and severe headache. The liver and spleen were palpable. A blood smear showed 66 per cent. polynuclears, 10 per cent. lymphocytes, 26 per cent. large mononuclears, poikilocytosis, anisocytosis, slight achromia, polychromatophilia and an increased number of platelets. Two days later he came complaining of acute colicky abdominal pain. He was very pale. He was sent to the wards that day.

There was considerable language difficulty in getting the history. The family history was unimportant. He had diphtheria at twenty. Three years before admission he had large coffee colored macular patches on his chest and arms for two months. These disappeared spontaneously. During the past year he was occasionally dizzy when he stooped over.

A year ago his bowels, previously regular, began to be constipated. A large variety of cathartics gave him movements only about once in two days. When the bowels were especially obstinate he took castor oil. This brought on very sudden attacks of "cramps," not pain, across the lower abdomen, occurring at any time and accompanied by severe frontal headaches and vomiting which lasted until his bowels moved. The vomitus was greenish and sour. During the year vomiting accompanied the cramps six to eight times. If his bowels did not move in two to four days he might have such an attack. For the past year after a heavy meal, especially of spaghetti or beefsteak, he had had a diffuse burning sensation all over the abdomen coming on about an hour after the meal and accompanied by nausea, epigastric discomfort and sour (?) eructations. Since the onset he had been growing progressively more tired and dyspneic on exertion. For the past six or seven months the stools had been black and foul. For five months he had been getting pale and recently possibly slightly yellow about the face and eyes, especially with severe cramps. Five months ago he had a sore pin-point red papule on the tip of his tongue lasting for a few days. For four months he had urinated three or four times at night and five or six times by day. Before that he had only occasionally urinated once at night. If he did not void at night he had

pain in the suprapubic region. His urine was perhaps more turbid than formerly. In the past three months he had had peculiar cramps in his fingers and especially in the right thumb once or twice a week lasting two or three minutes. He had had occasional muscular cramps in the leg, apparently not lightning pains. Until recently he drank about two quarts of wine and other liquor a day. During the past six months he had taken no alcohol because it aggravated the burning feeling in his abdomen. During the past two months he changed from castor oil to Russian oil, which worked better. The last and most severe attack of pain was on the day of admission, the one before four months earlier. The present attack, unlike the previous ones, was not relieved by a bowel movement. He vomited four or five times. He felt very ill and weak and sweat profusely. When he reached the hospital at 11 a. m. he was still vomiting and had cramps and headache. By 12:30 he was feeling well. He thought he had had a little gradual loss of weight during the past year.

Examination showed a fairly well nourished man with pale skin and mucous membranes, in no acute discomfort. There were carious teeth and pyorrhea. The cervical, axillary and inguinal glands were slightly enlarged. The lungs were hyperresonant, the breath sounds high pitched and vesicular. The apex impulse of the heart was felt in the fifth space. The left border of dullness was $8\frac{1}{2}$ cm. from midsternum, $1\frac{1}{2}$ cm. outside the midclavicular line. There was no other enlargement to percussion. A systolic murmur was heard best at the apex. The sounds were of fair quality. The aortic second sound was greater than the pulmonic second. The radials were thickened. The temporals and brachials were tortuous. The blood pressure was 110/76 to 112/50. The abdomen was moderately distended and tympanitic and was held rigid. The liver dullness was increased. The edge was not definitely made out. The spleen was moderately enlarged. The veins on the sides of the abdomen were prominent, especially those on the left. Rectal examination showed the prostate moderately enlarged, slightly boggy and tender. There was a small depressed scar on the left thigh. The pupils and reflexes were normal.

Before operation the urine was normal in amount except for diuresis March 9, 94 ounces; specific gravity 1.026 to 1.018; sediment showed one to six leucocytes per high power field at all examinations. Renal function 30 to 50 per cent. Blood: 6,250 to 9,900 leucocytes, 73 to 75 per cent. polynuclears, hemoglobin 55 per cent., 4,160,000 to 4,318,000 reds, marked achromia, moderate anisocytosis, poikilocytosis and polychromatophilia, rare coarse stippling, platelets increased and large in one of two smears; the average cell was smaller than normal. Was-

sermann negative. Non-protein nitrogen 33 mgm. Coagulation time 8 to 20 minutes. Gastric analysis gave 85 per cent. of thick yellow mucoid fasting contents, HCl 5, positive guaiac. Microscopic examination showed a few leucocytes. Test meal partially lost by vomiting. No free HCl, total acid 12, guaiac negative. Stools: guaiac positive at six of eight examinations, strongly positive at three.

March 1 X-ray examination with a barium meal showed no definite evidence of organic disease of the stomach or duodenum. The cecum was well filled, freely movable and not tender. The appendix was seen in the usual position, freely movable, not tender.

DISCUSSION

BY A. V. BOCK, M.D., AND J. D. CAMP, M.D.

DR. BOCK: The first two paragraphs of the history show that this man had an undoubted case of syphilis, was discharged to the Out-Patient Department having had one dose of salvarsan, and then was apparently lost sight of. I do not believe we lose track of as many cases now in that way as we used to, because the Social Service follows up cases much better.

Just what these mononuclears of the blood were would be interesting to know, because twenty-six per cent is a very unusual number, a number that we do not see except in one or two conditions, as for example in Hodgkin's disease, but it is rather rare, and one sees it too in cases of cancer in which metastasis to bones has occurred. But aside from frank leukemias I do not recall conditions in which this would occur, with one other exception,—reaction after salvarsan, of which we used to see more than we do nowadays. A considerable number of these cells would appear in the blood for a day or two after such reactions.

An important thing in considering this history is the fact that the man could speak but very little English. The outstanding things in the history that we have to consider are (1) the fact that he has been constipated for a year, having been previously regular and since then having been compelled to take large quantities of cathartics of one kind or another. The onset of constipation in a man at forty is a highly significant symptom and one which is overlooked in a great many cases. I believe that the two earliest symptoms of cancer of the stomach, for example, that we can detect in going back carefully over histories are gas and the onset of constipation. So that with that as a starter there is a very definite symptom that we have to explain. (2) Now in addition to constipation he has had cramps in the abdomen, pain across the entire lower abdomen both with and without a cathartic having been taken. Cramps and vomiting are symptoms usually associated

with intestinal disturbance more than with any other condition that I can think of in the abdomen. He also had distress apparently after a heavy meal such as is described here, with a diffuse burning sensation over the abdomen.

A few years ago Sir James Mackenzie asked me, "What is the commonest symptom of which patients complain when they come to see their doctor?" That symptom is fatigue or weakness. Of course it is a thing that is associated with almost every kind of condition of any standing, and the dyspnea in this case may go with that and may have nothing to do with his heart or lungs. It may be associated with the weakness that comes from a condition that has nothing to do with the things that ordinarily produce dyspnea, such as disease of the heart.

I do not believe we can place much reliance on the history of black stools. It is comparable to a history of jaundice in lots of people. When we ask them if they have had jaundice they say "Yes," but they mean that they have had a bilious attack or their friends have said that they were jaundiced, but they were not really. This man may have had tarry stools, but there is nothing in this history to make us place much importance on that statement.

This history of being slightly yellow I think goes with the possibility of his developing an anemia. The sore point on the tip of his tongue is probably an incident of no importance in this history.

I used to think that nycturia meant something wrong with the kidneys, but nycturia is a very frequent symptom in all kinds of conditions that have resulted in no considerable impairment of the health of a patient. We find it especially if the patient is suffering from distress so that he does not sleep very well, or is more nervous from whatever the background. I do not believe there is any significance about the nycturia here as meaning disease of the kidney. Turbid urine is another symptom of which patients complain, but when we find out that the only fluid intake they have in the course of the day is a cup of tea or coffee it is easy to see why they pass this kind of urine. Also concentrated urine is another cause of frequency.

The house officer has been at some pains evidently to rule out the question of lightning pains, but that cannot always be successfully done in a patient who does not speak English very well, and we might easily hook up his muscular cramps or numbness in his finger and thumb with tabes. He also has a long alcoholic history, and if he said he drank two quarts he probably drank three or four.

The attack which brought him to the hospital was apparently more severe than the others that he had had in that it was not relieved by having a bowel movement. When he reached the hos-

pital he was still vomiting, but all this seems to have disappeared by 12:30 p.m.

The outstanding things in the patient's history seem to me to concentrate on his abdomen and have to do with his intestinal tract rather than his stomach. I do not believe that disease in his stomach would result in the kind of severe abdominal cramps associated with nausea and vomiting that he has had. He could have the constipation that he complains of from disease in his stomach, but the constipation plus these critical attacks of pain are the two most significant symptoms of which he complains, together with the evidence that he has been developing slowly some degree of anemia.

The heart gave evidence by percussion of some hypertrophy, but I should not stress that very much. I doubt if he had hypertrophy of the heart at the age of forty without more evidence than we have had in this history of cause for producing it. The systolic murmur at his apex is negligible. Strangely enough, though, at the age of forty he has thickened radials and tortuous brachial and temporal arteries with a normal blood pressure. Arteriosclerosis of that grade at the age of forty is not unusual, but still perhaps not common, and I think in this man there are numerous causes that might contribute, such as alcohol, his rather generally bad hygiene of overeating, eating possibly at irregular times, and having general conditions that are not so favorable as they might have been. The record does not say what his occupation was, but he probably was a laborer accustomed to doing very heavy work, and that apparently is a very good predisposing cause for the production of arteriosclerosis. Raymond Pearl's statistics seem to indicate that the harder physical work a man is engaged in the more certain he seems to be to develop arteriosclerosis.

MISS PAINTER: He had been a tailor's presser until the past year and a half, and in the last six months he had been a waiter in a restaurant.

DR. BOCK: So that his work probably had very little to do with the production of his arteriosclerosis.

I think the history is suggestive of partial and even temporarily complete obstruction of his bowel. That might come from various causes, but the commonest thing that we think of is cancer.

They were unable to make out definitely the size of the liver, but did feel the spleen. Enlargement of the spleen may occur associated with malignant disease in the abdomen. The urine and renal functions were all negative. The blood shows a normal white count. There is evidence of secondary anemia. The coagulation time is probably not abnormal. It all depends on who carried out the technique, and if the first tube clotted in eight minutes the chances are the coagulation time is not far from eight minutes. There was a slight amount of hydrochloric acid

in the fasting contents and not very much more in the test meal. A positive guaiac test in the fasting content is not very significant I think, because we cannot rule out the question of trauma, and without other things to go with the story I should be inclined to disregard it. The most important finding here I think is the presence of blood in six out of eight examinations of the feces.

The X-ray examination of the stomach and duodenum as reported here was negative.

There are two or three possibilities which have to be cleared up. We have a positive history of syphilis. We have the presence of an enlarged spleen and a possibly somewhat enlarged liver. We have to account for the crises that he had with reference to his bowel. Can that be done on the basis of syphilis? In order to give him the kind of attacks of which he complains chiefly I think one has to come down to a lesion in the bowel, and about the only lesion that syphilis can produce in the colon is in the nature of a stricture. That is a very rare condition. I do not remember ever having seen one here. In the cases reported the bowel condition is that of diarrhea rather than constipation, and for some reason they are apt to have a good deal of inflammation in connection with it, so that there is pus and often blood in the bowel movement. The possibility of a straight luetic involvement of the liver and spleen producing these symptoms seems to me very remote.

Is this a primary disturbance such as Banti's disease, with an enlarged spleen and a somewhat enlarged liver? Against Banti's disease somewhat is the age. Banti's disease does occur at this age, but in the cases that we have had in the clinic on which a positive diagnosis is made by eliminating everything else they have been younger people. There has been no history of hemorrhage unless this history of black stools can be taken as such. And on examination the spleen is not the kind we usually see in Banti's disease, and he has not a leukopenia, which is practically constant in that disease. He could have the occult blood in the stools on the basis of Banti's disease.

I believe that the blood is the picture of secondary anemia. The only other condition that I can think of that really comes into this diagnosis is malignancy of the bowel. In favor of that are the symptoms as given here of constipation of a year's duration, of repeated attacks of cramps with pain, nausea, and vomiting that are probably associated with sudden partial or nearly complete obstruction of the bowel, his secondary anemia and the presence of blood in the stools. One finds occult blood in the stools more often in cases of cancer of the colon than in almost any other condition, and I believe that is the condition here.

There is one other thing that might be con-

sidered, and that is alcoholic cirrhosis. But he has not the kind of history we are accustomed to see in alcoholic cirrhosis, of gradual development of indigestion and then possibly of hemorrhage from the mouth, and the kind of wasting and downhill course that such patients usually

diagnosis on the case is before Dr. Camp shows us the X-rays.

DR. CABOT: I have nothing better to guess.

FURTHER HISTORY

A barium enema March 3 (Plate 1) was not entirely satisfactory because of considerable

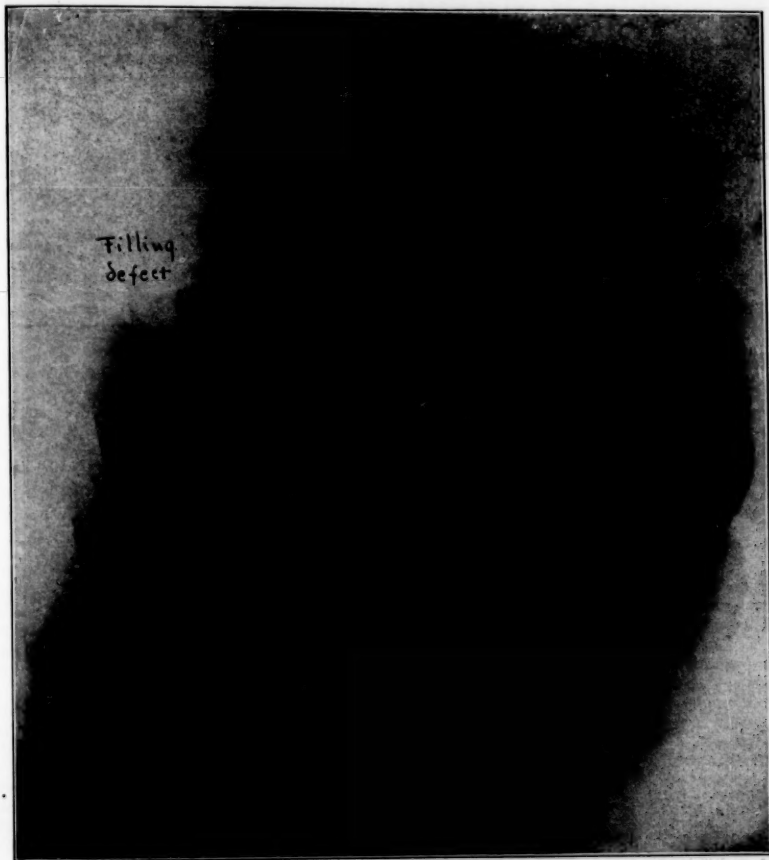


PLATE 1. Barium enema March 3. The examination was not entirely satisfactory because of considerable gas in the colon. There is some dilatation of the sigmoid and descending colon. At about the midportion of the descending colon is a well defined annular filling defect which seemed to persist. There was some delay in the barium at this point. There is also an atypical appearance in the shadow of the cecum, perhaps due to gas.

show. One could account for the occult blood in the stools on the basis of cirrhosis.

I am inclined to think that the diagnosis is malignancy of the colon, and since that condition, aside from malignancy of the rectum, is more often in the sigmoid flexure, I am going to guess that it is somewhere in that end of the colon. I would like to know what Dr. Cabot's

gas in the colon. There was some dilatation in the sigmoid and descending colon. At about the midportion of the descending colon was a well defined annular filling defect which seemed to persist. There was some delay in the barium at this point. There was also an atypical appearance in the shadow of the cecum, perhaps due to gas. A second examination of the colon March

4 (Plate II) confirmed the previous findings. Besides the filling defect in the descending colon there was a definite irregular filling defect involving the ascending colon and the cecum. At no time were the cecum and the ascending colon seen to fill normally.

ported, "Cirrhosis and splenomegaly, probably syphilitic. This may be the only lesion, but I think the positive X-ray reports and the history of pain and loss of weight indicate an exploratory operation before repeating antisiphilitic treatment."



PLATE II. Second examination, March 4. Confirms the previous findings. Besides the filling defect in the descending colon there is a definite irregular filling defect involving the ascending colon and the cecum. At no time were the cecum and the ascending colon seen to fill normally. (The film is defaced.)

The visiting physician noted, "There is clinically no evidence of tumor of the intestine, . . . either the descending colon or the cecum. The spleen is enlarged three or four centimeters, the edge felt. There may be a small amount of ascites. The possibilities in my mind are syphilis or Banti's disease. The degree of liver enlargement is very slight." A surgical consultant re-

March 15 operation was done. It showed the spleen about twice the normal size, non-adherent. The liver was slightly enlarged but normal in color and consistency. There was no free fluid. In the splenic flexure adherent to the under surface of the spleen was a hard cylindrical tumor about two inches long. In the ascending colon was a hard irregular ulcerated growth

mostly involving the posterior wall, which when mobilized revealed a mass which about filled the fist. There was no definite glandular involvement. The right colon was removed with section through the terminal ileum and through the first portion of the transverse colon. These ends were closed and the terminal ileum was anastomosed side-to-side to the redundant sigmoid. At the second stage it was planned to remove the remainder of the colon, including the growth in the splenic flexure. Pathological examination of the annular obstruction in the lumen of the ascending colon showed a superficially ulcerated growth with elevated margins varying in width from 4 to 6.5 cm. Microscopic examination showed a structure of atypical columnar epithelium with many cells in mitosis forming closely packed interlacing clusters. Gland tubule formation was not present. There was an occasional small secondary tubule formed. Two lymph nodes were negative. Diagnosis, carcinoma.

Following operation surgical transfusion of 200 c.c. of whole blood was done. The patient was in good condition after the operation, but not so well next day. 500 cubic centimeters more of blood was transfused. March 17 he was weaker. The pulse was rapid and poor in quality. The temperature was 103.8°, the pulse 160, the respiration 48. There were râles at the bases. He was put in high Fowler's position because of some abdominal tenderness, possibly peritonitis. The respiration became labored. There was mucus in the throat. That evening he died.

FURTHER DISCUSSION

DR. CAMP: I think we can rule out the stomach and duodenum from the X-ray examination as noted in the record. We examined this man's colon by a barium enema on March 3 and there was some dilatation of the sigmoid. About the midportion of the descending colon there was a well defined annular filling defect. This seemed to persist. There was also some delay of the barium. An annular type of filling defect of the large bowel which persists, to the minds of most roentgenologists usually means carcinoma. There is also in this case an atypical appearance in the shadow of the cecum and ascending colon. It was difficult to make a successful examination because gas accumulated in various portions of the gut.

We should be very careful in interpreting filling defects in the colon whenever there is gas present, because the gas will temporarily displace the barium and unless we can palpate the patient and move the gas shadow around we may think we have an organic lesion. In this case we thought we had two filling defects, one in the descending colon and another in the ascending colon and cecum. We asked for another examination.

This also brings out another point. If we were

to rely entirely on the X-ray films I think we have very little evidence of any pathology at this time. There is a slight narrowing, but the colon loops over itself and the filling defect is almost completely covered up. In other words the findings in this case are almost entirely made by the fluoroscopic examination, rotating the patient so that we could examine the various portions.

We examined him a second time and the observations were very interesting. In order to bring out the defect in the descending colon we had to rotate the patient. This (Plate I) shows the annular filling defect with the well defined borders, with the dilatation above and below it. I know of very few conditions which will produce a filling defect of this type except carcinoma. Spasm may do it occasionally, but we have ruled out spasm I think by the persistence of the defect at the same point at two observations. Spasm will as a rule shift around, and if we see the patient twice it will not usually occur at the same point. Adhesions I do not believe will take this typical napkin ring appearance. The second filling defect we saw before also persisted and we have this very irregular, moth-eaten appearance in the colon (Plate II) just below the hepatic flexure. In other words, we examined this patient twice and he showed practically the same thing at both observations. In the minds of most X-ray men any filling defect which persists in the same position and is of the same character in two observations usually has to be explained by organic disease of some kind.

We were a little up in the air because he had so many lesions. If he had had either alone we would have been perfectly satisfied to make a diagnosis of carcinoma. Each filling defect is rather characteristic, I think, of carcinoma, and of course it is not very common to have carcinoma at two different points in the colon in the same individual, although such a condition has occasionally been observed. It is possible to have a malignant condition or other organic lesion, as perhaps tuberculosis, in one part of the colon and a referred spasm in another. We have a very interesting slide in Dr. Holmes's collection which shows an irregularity typical of carcinoma in the transverse colon, and about eight inches further along another area which looks like it, which is due to spasm. If one had not had the fluoroscopic observations to go with it and had not been able to carry out the various palpations that we do, one would think we had two lesions in the transverse colon. I think we have ruled out spasm here, because both defects remained exactly the same. Spasm I think would have shifted and been different. We were quite satisfied that this man had two lesions of the colon.

There is another condition which we are learning a little about, that is, lymphoblastoma or malignant lymphoma. We have learned that

this not infrequently involves the intestinal tract and often simulates carcinoma. We thought that that was a condition to be borne in mind in this particular case.

The diagnosis so far as we were concerned was a double lesion of the colon, probably malignant.

DR. CABOT: How much discomfort do you have to give the patient in manipulating him so that you can get a thorough study in a case like this, where you have to put in a lot of liquid and barium? Is it a good deal of a process? Is a man a good deal tired by it?

DR. CAMP: Very few of the patients complain. I think there is a lot in the technique, not so much in the palpation, but in having the barium warm. If the barium is warmed to the body temperature very few patients complain. We frequently examine patients and get all through with them and they are not conscious that anything has happened. On the other hand, if the barium is the least bit cold they will complain of cramps and have difficulty in retaining it. As a rule they do not complain of much pain when we manipulate the colon.

There is a little point to be borne in mind, which is that sometimes we find one lesion and we are inclined to stop. The point was brought out when we were examining this patient. We had evidence enough for a diagnosis of a lesion in the descending colon. I hesitated about doing anything more because I knew the man had a certain amount of obstruction and I did not want to put in a lot more barium. That is a poor thing to do, because when the patient comes to surgery the colon is distended and it is very disagreeable. But in view of the fact that we had an irregularity there before I felt that it should be checked up, and we went ahead. Of course I am glad that we did. That is a point that is often forgotten. For instance, in the stomach one will find a very definite ulcer, and forget all about the duodenum, and it is perfectly possible to have another there, although it does not often occur.

I recall this case. We talked it over with the clinicians, and the clinicians felt that in showing two lesions we were going a little too far, and therefore in the face of other things they thought that this should be disregarded and that the whole thing could probably be explained by Banti's disease or something of that sort. The surgeons felt the same way. If we had shown one lesion they would have felt happy, but we had said a little too much. They explored this man with a little fear and trepidation.

The most interesting thing about this at operation was that these two lesions appeared to be independent of each other. So far as one could make out there was no glandular involvement or evidence of metastasis in the abdomen.

DR. BOCK: I think he had a peritonitis without much doubt.

DR. CABOT: I would like to ask Dr. Richard-

son, apropos of what Dr. Camp has just said about malignant lymphoma, isn't that more common in the small intestine than it is in the large?

DR. RICHARDSON: Perhaps so. We do find it in the large intestine.

DR. CABOT: The cases I have seen have been in the small intestine, and there were several tumors.

DR. CAMP: We have been going over our cases of malignant lymphoma of the intestinal tract. I have forgotten the exact number, but we have either two or three involving the large intestine. They were large solitary tumors which grossly simulated carcinoma. The diagnosis was made by the pathologist. It does the same thing in the stomach. We hoped to find a distinguishing point which would enable us to make the diagnosis from the X-ray examination, but we were not successful. It is a condition we are looking for now more and more. This case was interesting I think because it showed two primary carcinomas, which is a very rare condition.

DIAGNOSIS

Carcinoma of the colon, multiple.
Splenomegaly.
Hypostatic pneumonia.
Syphilis.

CASE 12243

AN UNUSUAL CAUSE OF ABDOMINAL EMERGENCY

SURGICAL DEPARTMENT

An Irish salesman seventy years old entered January 26 complaining of pain in the lower abdomen and vomiting. No past history was obtained.

A week before admission while lifting a weight he felt sharp pain in the right lower quadrant. This persisted in the same area, constant, and next day was worse. January 24 it spread across the lower abdomen and he began to vomit. The worst pain was around the umbilicus. His bowels moved daily until January 25. He vomited six times in all.

Examination showed a well nourished man in pain. The skin was hot and dry. The face was flushed. The tongue was dry and heavily coated. The respiration was shallow and thoracic in type. There was marked general spasm and tenderness over the abdomen, more marked on the right side. There was dullness over both flanks. No definite masses could be felt. There was no marked distension. Rectal examination showed tenderness on both sides, more marked on the right.

Before operation the urine was negative, the white count 6,000.

The temperature was 102.4°, the pulse 110, the respiration 28.

Operation was done the day of admission. In view of the conditions found the patient was put on the dangerous list that night, although his general condition was good. Next day he was given two subpectorals. The condition was unexpectedly good, and continued so through the following day. That night however his throat filled up a little with mucus. In the morning he was much worse, with distinct rattling in the throat, weak pulse, cold extremities and very poor general reaction. He continued to grow weaker through the day. That evening he died.

DISCUSSION

BY EDWARD L. YOUNG, JR., M.D.

This is the type of case where to see or examine the patient would tell us a great deal more than this story, because this might be general peritonitis from a ruptured viscus, an acute appendix, even a ruptured appendix abscess which had previously been unnoticed, and it might be nothing at all.

He has a white count which is low, he has a temperature which is up. Of course in the old days, if it were a younger man, we might say he has a typhoid ulcer which has ruptured. He has had typhoid and did not recognize it. At this man's age and in these days that is unusual. I have seen a case come into the emergency ward with a very similar story where on very close cross-questioning the patient admitted a little indisposition a week before. "Oh, yes," he said, "I had a sort of a belly-ache last week. I took some of the horse medicine and I was all right." He brought a load of vegetables in to the market and in lifting he got this same pain, and what he had had was an appendix with abscess formation the week before, which had not laid him up, and the lifting broke the abscess.

I think the main thing we have to go on here however is marked general spasm and tenderness over the abdomen, more marked on the right, with the temperature and pulse both elevated. The low white count suggests that he has very little resistance. Of course, for the first diagnosis always put down appendix. It is rather rapid here,—a strange onset if you will. It seems hard to fit any actual rupture into that because in the first place he would not have gone seven days with an actually ruptured viscus without something more to show for it, I think. He has not got an internal strangulated hernia. His bowels have moved daily up to the day before admission, that is, six days after the onset. He had not vomited enough. He is not sick enough. It seems to me that an appendix is probably the best bet.

Diverticulitis of the sigmoid which had become adherent at some point along the brim of the pelvis, perhaps actually to the right side so that the straining tore an adhesion and at the same time let a little sepsis loose and formed an abscess is possible.

The main thing is what to do, and simply on the feel of his abdomen as translated in these words, "marked spasm and tenderness," with the temperature and vomiting, it seems to me the only thing that can be done is to explore. At seventy, thoroughly dehydrated, a subpectoral before operation and a careful anesthesia are very important.

I do not see how we can fit carcinoma in here very well because this is the picture of sepsis now. What else could it be?

DR. W. D. SMITH: Could he have malignancy that had ulcerated through?

DR. YOUNG: I have just said it seems hard to fit that in because it would mean a perforation, and it seems to me that with a perforated cecum—putting that down as the most likely point on the right side—that very septic material would make a dead man in seven days rather than this picture.

I do not know what else to put down. It seems to me we have to put down the first diagnosis as a peritonitis, cause unknown, the first bet appendix, the second possibly malignancy with partial rupture, and third a diverticulitis.

DR. SMITH: How important is the history of diarrhea in making a diagnosis of diverticulitis?

DR. YOUNG: I don't know. My personal belief is that it is not of great importance. I think the history of previous ill-defined, intermittent pains, cramps, with some bowel upset is more important than diarrhea as such.

DR. YOUNG'S PRE-OPERATIVE DIAGNOSIS

General peritonitis.
Appendicitis?

PRE-OPERATIVE DIAGNOSIS

Acute appendicitis.
General peritonitis.

OPERATION

Ether. Right rectus muscle splitting incision. Free pus was encountered on opening the peritoneum. No pathology was found in the region of the appendix, although the appendix itself was not definitely seen. An inflammatory mass was found attached to the anterior abdominal wall in about the midline two and a half inches above the pubis. This appeared to be an inflammatory invasion of the wall of the sigmoid, presumably diverticulitis. The mass was about 11 cm. long, 8 cm. wide, and 6 cm. in thickness. There was

free pus throughout the pelvis and the lower abdomen. Cigarette wicks were carried through the operative wound to the pelvis and through the right flank. Through a stab wound in the left lower quadrant a wick was carried to the left flank. The abdominal wound was closed in layers with through-and-through sutures.

FURTHER DISCUSSION

He had his general peritonitis and presumably a diverticulitis. I think if there had been a very good history there would have been evidence of some trouble beforehand. I think he died of general sepsis plus. I shall be interested to see whether or not Dr. Richardson admits that the surgeon was right.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Diverticulitis of the sigmoid colon.
General peritonitis.
Incision and drainage for general peritonitis.

DR. EDWARD L. YOUNG'S DIAGNOSIS

General peritonitis.
Diverticulitis of the sigmoid.

ANATOMICAL DIAGNOSIS

1. Primary fatal lesion

Adenocarcinoma of the sigmoid with necrosis of wall and general fibrinopurulent peritonitis.

2. Secondary or terminal lesions

Soft spleen.
Focal pneumonia, lower lobe of right lung.
Arteriosclerosis.
Slight hypertrophy and dilatation of the heart.

3. Historical landmarks

Chronic pleuritis.
Obsolete tuberculosis of a bronchial gland.
Obsolete tuberculosis of the apices of the lungs and small focus in lower lobe of right lung.
Operation wounds.

DR. RICHARDSON: He was a fairly nourished white man. There was possibly some slight distension of the abdomen; the wall was soft. There were the two wounds mentioned and cigarette wicks in each. The peritoneal cavity showed frank peritonitis and here and there pools of pus between the coils of the intestine. On the right side the inguinal canal at the time of necropsy admitted two fingers. There was nothing in the canal at the time of necropsy except much purulent material which extended from similar ma-

terial in the peritoneal cavity and down into the scrotum. The esophagus, stomach, pylorus, and small intestine were negative, the small intestine not distended.

Large intestine: In the region of the sigmoid along a strip of six cm. there was an ulcerated irregular plaque-like mass of new-growth tissue which extended around the wall. The upper and lower margins were irregular, elevated, lip-like, and on cross section there was infiltration with new growth into the thickened wall. There was some obstruction of the sigmoid by the mass, but it was a rather flat mass, so the obstruction was not very marked. The wall in several places was necrosed, and of course the material in the large intestine infiltrated through the wall, and on the outside of the sigmoid there was a layer of granular peritonitis in patches, which passed over into the general peritonitis in the cavity. No diverticula were made out anywhere. The rectum was negative.

There was some fibrocalcereous degeneration of a bronchial gland,—obsolete tuberculosis,—and foci of gray-red pneumonia in the right lung, and some obsolete tuberculosis in the apices of the lungs. In the left lung there was no area of consolidation.

The heart was a little enlarged. He had some arteriosclerosis.

DR. YOUNG: You think that may well have been slightly adherent and the lifting really did pull a weak spot and start the sepsis through?

DR. RICHARDSON: It might have. I forgot to say that the appendix was small, cord-like, and the lumen obliterated.

DR. YOUNG: Just the sepsis going through the wall.

DR. RICHARDSON: Yes.

MIDDLESEX COLLEGE OF MEDICINE AND SURGERY

The exercises connected with the graduating of the 1925 Class of the Middlesex College (the first Middlesex College class that has completed the fifth hospital internship year as a requirement for graduation) took place May 29, 30 and 31. The names of the graduates are as follows:

Irving Alexander, Samuel Irving Blacker, Benjamin Bronfin, Morris Clayman, Norman F. Dewing, Simon Ehrlich, Joseph Anthony Finamore, Benjamin Louis Gipstein, Mahmoud Hamdi, Max Henry Jacobs, Maurice Emanuel Kassels, Rudolph A. S. Kruger, Eva Levine, Harry Levine, Benjamin F. Lizio, C. Holman Lovell, Earl Newman, S. Harry Nevins, Samuel Lewis Poplack, John Repshis, Vincent Sena, Daniel William Shea, Cecil Smith, Lewis Taylor, Miriam Sonia Udin, Dominic Zito.

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The Massachusetts Medical Society

THE ANNIVERSARY MEETING OF THE MASSACHUSETTS MEDICAL SOCIETY

ABOUT seven hundred and fifty members and guests met in the Hotel Kimball, Springfield, June eighth and ninth, 1926, to participate in the one hundred and forty-fifth anniversary of the oldest medical society with a continuous existence in this country. Seven hundred and five members registered. Many of the wives of members took this opportunity to visit Springfield, which is recognized as one of the most beautiful and progressive cities of the Commonwealth, and representatives of other New England states and noted authorities were present as guests of the President and sections.

Dr. William Darrach, Dean of the College of Physicians and Surgeons, Columbia University, delivered the Shattuck Lecture setting forth the interrelations of the Physicians and the Hospital in a clear exposition of the coordinate duties of the hospital staff and the managing board. His address will be found on page 1105 of this issue.

Dr. Charles H. Mayo of Rochester, Minn., and Dr. Albert A. Berg contributed to the discussion relating to peptic ulcer. Both the medical and surgical features of the disease were thoroughly discussed. This section proved to

be the greatest drawing card, for a sign "Standing room only," might well have been displayed on the door of the ballroom, which can accommodate nearly five hundred persons. The discussion brought out that neither medical treatment nor operation can be relied upon to produce absolute cures, but that surgeons and internists must be associated in a considerable proportion of the cases in order to secure the best results.

The papers will be published in due time and should be read by all practitioners who want to be well informed with respect to this subject.

The attendance at the meeting of the Section of Tuberculosis showed that this important cause of morbidity and mortality is still of great interest to the profession. At this meeting the application of surgery to the treatment of well established pulmonary tuberculosis was fully discussed and the necessity for establishment of artificial pneumothorax and thoroplasty were well explained.

The Section of Obstetrics and Gynecology presented especially valuable information on the diet during pregnancy as affecting the weight of the infant, the important feature of post partum cases and the toxemias.

The Section of Medicine was very well attended and the various problems of thyroid diseases were presented in a clear and informative manner. Here again surgeons united with internists in elucidating the complex manifestations of abnormal conditions of the thyroid.

Pediatrics was given attention in matters relating to school children, the surgical aspects of pyuria, and diphtheria. The papers and discussions were instructive and interesting.

The new Section of Radiology and Physiotherapy drew a large number of those who are desirous of learning about new methods of treatment. The claims for diathermy gave promise of a great and important advance in the treatment of many affections and if they can be found to be true, we are on the threshold of a great advance in therapeutics. The reader of the opening paper claimed that by the proper use of diathermy the mortality from pneumonia may be reduced by fifty per cent. Professor Bovie's explanation of the physics of ultra violet light was most interesting, although we venture to say that the logarithmic formulas were rather too technical for the comprehension of even those who have been drilled in modern pre-medical scientific subjects. He made clear, however, the practical application of this light in the treatment of disease. The report of the results of the use of ultra violet light in the children's hospital indicated a very definite field for this agent.

The indiscriminate use of the X-ray in malignant disease was discouraged and it was shown that although powerful for good in properly

selected cases it was a dangerous treatment when improperly used.

The opinion was freely expressed that the quality of the papers and discussions in the several sections had never been exceeded in previous meetings.

The annual dinner was a success although it was served later than many members wished, because of the necessity of an interim in order to have the tables and other arrangements brought into the hall in which the general meeting had been held.

The President conducted the after-dinner exercises and in his opening remarks referred to the important questions before medical societies of the present time, paying especial attention to the standing of certain medical schools which should be led to raise the standards of education to the end that practitioners may be better qualified to care for the citizens of the state. He submitted records of the standing of graduates before the Board of Registration in Medicine, as shown by the following tables:

TOTAL NUMBER OF PHYSICIANS EXAMINED, REGISTERED AND REJECTED BY THE BOARD OF REGISTRATION IN MEDICINE FROM 1911 TO 1925

	Ex- am- ined	Reg- is- tered	Re- jected	Per Cent. Re- jected
Harvard	738	730	8	1.08+
Tufts	1039	964	75	7.22—
Boston University	223	213	10	4.48—
Massachusetts College of Osteopathy	372	169	203	54.57—
College of Physicians and Surgeons, Boston	164	61	103	62.80+
Middlesex College of Med- icine and Surgery	209	108	101	47.84—

NUMBER OF PHYSICIANS EXAMINED, REGISTERED AND REJECTED BY THE BOARD OF REGISTRATION IN MEDICINE DURING THE YEAR 1925

	Ex- am- ined	Reg- is- tered	Re- jected	Per Cent. Re- jected
Harvard	38	38		
Tufts	70	69	1	1.43
Boston University	16	16		
Massachusetts College of Osteopathy	69	40	29	42.02
College of Physicians and Surgeons, Boston*	8	6	2	25.
Middlesex College of Med- icine and Surgery	49	27	22	46.94

*Two of this number had been previously examined and rejected. It was fully explained by the President that these figures cover repeated examinations of one person in some cases, for when a person is rejected more than once that person is recorded again, as many times as he was examined and rejected, as a rejected applicant.

Introducing the speakers, the President blended cordial welcome to each with witty illustrations applicable to the positions occupied.

Because of the inability of the Governor to be present, the Honorable Wellington Wells, President of the Senate of Massachusetts, represented His Excellency. He assured the Society that Governor Fuller is in hearty sympathy

with the ambitions of the profession in its efforts to promote the best possible service in dealing with illness and disability and the best type of preventive medicine. He paid tribute to the character and purpose of the members of the profession who come before legislative committees, because they are unselfish, earnest, watchful and alert in endorsing progressive legislation as well as instructing the legislature with respect to harmful measures, and assured the physicians that the citizens of Massachusetts are deeply concerned in the best standards governing practice and medical education.

He referred to the great influence of the doctors of past generations and felt that we could with profit review the teaching and example of the leaders in medicine of earlier times because now, as then, the doctor is in intimate touch with family life more constantly than other servants of the people, coming into close relation with the individual at birth and continuing through life, ministering to him in his trials and giving comfort and relief. Perhaps in this later period with the growth of specialism the older type of doctor is not so common, but we can rely on the spirit of the profession which will lead to the better application of already acquired knowledge and the discovery of new methods of treatments which will be productive of great good both to the profession and the people.

After calling attention to the importance of Springfield in the affairs of the Commonwealth, the President introduced His Honor, Mayor Parker, who cordially welcomed the convention to Springfield, which although sometimes regarded as a complacent city can properly claim to be in the front rank of the municipalities of the country for it is justly proud of its schools, civic spirit and its water supply, the latter product although not always the most desirable beverage is appreciated by those who are obliged to use it. He felt that the practice of medicine may properly be considered as the most vital and absorbing work in which one may engage.

He cautioned his audience not to encourage the belief that doctors are indifferent to political matters, because nothing is of more importance than keeping the State and Nation from deviating from truth and right in public affairs. He urged the necessity of discrimination in the election of public officials and since the people should aid the medical profession in its field of service the profession in turn should use its influence in securing the best type of citizens in maintaining the functions of the State.

He felt especially pleased because of the honor conferred on the City in coming here for this meeting and cordially invited the Society to select Springfield for future conventions.

The President referred to Springfield as the home of influential newspapers which have been important educational and moral forces in the

development of the State in introducing Mr. M. S. Sherman, the Editor of the *Springfield Union* who spoke as follows:

On the monument to Pasteur in Paris is an inscription which freely translated reads: "To cure sometimes; to relieve often; to comfort always." I can conceive of no such legend appearing on a newspaper editor's monument, assuming for the moment a citizenship sufficiently forgiving to erect one, yet the newspaper does sometimes "cure" and often does "relieve" by major operations on the body politic. It cannot, however, lay claim to the third tribute so properly paid to Pasteur, which belongs quite generally to the medical profession.

"To comfort always" is not a distinguishing characteristic of the newspaper. Comforting things occasionally find their way into its columns—comforting to some persons at least, but almost invariably bringing discomfort to others. No unanimity of belief exists among newspaper readers, no unanimity of opinion on any public question or event. What is one man's meat is another's poison. Consoling words that may help to relieve somebody's trouble excite only derision and contempt in a different quarter. No, the newspaper cannot be said to be a comforter at any time, let alone being a comforter always.

There are newspapers—I can think of one in particular—that make a very conscientious endeavor to be as comforting as possible by printing nothing disquieting or alarming; that strive to present a Pollyanna picture of life in the belief that disregard of stern realities may well be encouraged. That which is unlovely and of ill repute is error and should receive no recognition. It is unquestionably a comforting doctrine, but if generally accepted by the press would neither cure nor relieve any evil of society.

Even where the intention of the estimable newspaper I have in mind is worthy, according to its own light and understanding, that newspaper frequently experiences great difficulty in preserving its consistency. It eloquently appeals to its readers to resist, passively at least, the vaccination law against smallpox, on the ground that the law is unnecessary and an infringement on the rights and liberty of the individual. It will not admit, of course, that smallpox is a reality, but assuming for the sake of argument that it is, should it not be the undoubted right of each and every individual to have smallpox and give it to his neighbor if that be in accordance with the wishes of divine Providence? Personal liberty is thus raised to the nth power. It is the one factor that should guide and control the destinies of the individual. It is like the Patrick Henry cry, "Give me liberty or give me death," granting that death is real and not a fleeting fancy.

Yet with respect to another phase of personal liberty we find this particular newspaper exceedingly outspoken in its desire for restriction and curtailment. It is right and proper and in every way commendable for the Federal Government, the State government, the local government, to exercise every available bit of police power to see that the citizen, whatever may be his views as to vaccination, is prevented from indulging himself in any beverage that exceeds the Volstead standard. This it is necessary to do, we are told, in order to protect society against the ravages of alcohol. What is personal liberty that it should be invoked against a dispensation so wise and beneficent? But it is a monstrous invasion of personal liberty to submit to vaccination for the protection of society against the loathsome disease of smallpox!

I mention this only to illustrate the difficulties that the comforting kind of journalism sometimes encounter. Is it astonishing, therefore, that those of us who feel no particular compulsion to print only uplifting news should be content to place our own modest interpretation upon the proper sphere and limitation of personal liberty, and that we should regard news as news whether it is pleasant reading or not?

It is the true function of the press to mirror life as it is, not as it ought to be, in the estimation of those who assume the regulation and control of all human conduct. This does not necessarily mean that everything that occurs should be printed. It does not mean a strict application of Dana's motto that anything God Almighty lets happen is fit for the *Sun* to print. It is quite sufficient to chronicle the major things that occur above ground, without opening the manholes and exposing the contents of the sewers to public view. The greater emphasis should be placed on the meritorious achievements of life. But unless we know how the other half lives, unless we know about those who prey on society as well as those who pray for it, we are not going to get that evaluation so necessary to a correct understanding of our economic and social problems.

If the newspapers are accused of printing too much crime news, it is only because there happens to be a superabundance of crime. In no well-regulated newspaper office is it regarded as good news, as news that especially appeals to the reader. Much of it that comes over the wire or is brought in by local reporters never is printed at all. It is subjected to the same selective process that governs the disposition of other news. Some if it, for various reasons, is regarded as worth using. It may have a peculiar local interest. It may be of a nature so sensational as to set it apart from the ordinary run of crime. It may be of startling importance in the realm of law or medicine. It may point the need to new correctives.

It is significant that some of the very clergymen who denounced the newspapers for printing anything about the Rhinelander case used that very case as a theme for sermons. They never would have known anything about it if they had not themselves followed the details as given in the respectable newspapers, and they would read, of course, no other kind. There was no obligation upon them even to scan that particularly unsavory story, yet they absorbed it, denounced the newspapers for printing it, and then unblushingly regaled their congregation with sermons on the subject!

It is as essential to the clergymen as to the doctor, the lawyer, the business man, to know what is going on around and about him in the various phases of life. Where the average newspaper errs is not in printing the news of crime, but in failing to see it in the right perspective and to treat it with the proper sense of proportion. It errs grievously when it magnifies the criminal and undertakes to make of him either a hero or a martyr. Chapman was not a "master mind" among criminals, and certainly not among honest men. If he had been especially skilled in the pursuits he unwisely chose to follow he would not have spent most of his days behind prison bars, and he would not have ended his ill-spent life on the gallows. Newspapers that depicted him as a heroic figure gave unnecessary encouragement to other criminals and brought discredit upon themselves.

No, it is not the publication of crime news that hurts but the presentation of that news in attractive garb. Society is so constructed as to be able to withstand the truth, however unpleasant it may be, but no section of the press ought to make the task of society harder by extolling those whose destructive tendencies gain them notoriety.

The power of suggestion is a potent influence for good or ill, and is so recognized by newspaper men who take their work seriously. Despite the obvious shortcomings of the press, there is for the most part a conscientious purpose to avoid details in the presentation of the news that tend to work unfavorable consequences. That is why responsible newspapers do not tell what particular poison the suicide employed, or how he held the pistol, or where he made the slash that ended his life. Let them overplay suicides and an epidemic of suicides may easily follow. So with crime; its overplaying in sensational headlines is apt to beget more crime. Reason and sense are needed in newspaper making.

Members of the medical profession can be helpful in calling the attention of newspapers to various sins of omission and commission that may come under their observation. Such suggestions, if not always practicable, are always welcome. A newspaper is a complex organism. It is constantly dealing with the human equa-

tion. No one man can see all that goes into it. Hard and fast rules cannot be laid down because the conditions are never precisely twice the same. The circumstances that alter cases are ever present. Where the newspaper slips in giving an account of some new discovery of medical science, the physician or surgeon will confer a favor if he will take the trouble to point out the inaccuracy.

A newspaper man must know a little something about many things, but he cannot be expected to possess expert knowledge with respect to all of them. He is lucky if he knows one subject tolerably well. If he could be at one and the same time a specialist in medicine, a profound theologian, an expounder of Blackstone, an expert in finance, an authority in government, he simply would not remain to waste his talents on printer's ink. Reasonable allowances must be made for the diversities of the calling in which he is engaged. He must even be excused when the linotype operator makes him say "The doctor felt the patient's pulse and decided there was no hope," which may have been an unnecessarily cruel thing to say.

I sometimes strongly suspect that the doctor regards the editor in somewhat the same light as did the agitated wife who asked an M.D. what the stuff was that he was about to give her husband. "An anesthetic," replied the doctor. "After he has taken it he won't know anything." "Then don't give it to him," she replied. "He doesn't need it."

When you pour into our ears all sorts of high-sounding medical terms, when you talk the jargon of your profession and show irritation when we do not understand, please be a bit charitable. Remember that the facts you want to get across to the public through the medium of the newspaper must be told in language that the average reader can understand. If you can first make the editor understand, you have gone a long way toward enabling him to convey that understanding to others.

The public has a real thirst for what I may term, for want of a better phrase, medical news. A great deal of such news is printed by the newspapers. Some of it comes from authoritative sources that insure its accuracy. Some of it comes from physicians none too well-informed themselves. It has the unfortunate effect of giving the sufferer hope far beyond reasonable expectations. I fully realize that the ethics of the medical profession frequently preclude a physician from permitting the use of his name in connection with information that ought to be given the public. Here is where the local Academy of Medicine, if there is one, may properly come in. It is entirely impersonal; it profits nothing from the advertising; it violates no code of personal ethics. The statement would gain in authority by coming from such a source,

implying at least that it was the coördinated effort of expert minds.

If I correctly understand the situation, your profession is turning from therapeutics to prevention, and here the newspapers can be of inestimable value. We are told that the span of life is constantly increasing, that centenarians are going to be more and more common as time goes on, thanks to the better knowledge we have, not of curing disease but of preventing it. But after all it does not matter so much how long we live as how many years we enjoy good health and thus are enabled to enjoy life and translate it into service and helpful influence.

The newspapers have played an important part in the campaign against tuberculosis. Without their aid it would have been extremely difficult, if not impossible, to have made the headway against this dread scourge that has been made. They have made the public understand the value of fresh air and nourishing food in the treatment of this malady. They have encouraged a ready response to requests for contributions to carry on the work of preventorium. They have made it clear that tuberculosis is a preventable disease; that it can be wiped out. They have helped to allay the fears of parents with respect to the use of various antitoxins among children in the public schools. They have given gladly of their space to "Cancer Week" and other movements carried on by the medical profession to advance the work that is being done along the lines of prevention. There is every reason why the medical profession should regard the newspapers as a great contributing agency to the spread of scientific information.

Another service that the newspapers perform for the medical associations indirectly, and for the public more directly, is when they call attention through their news and editorial columns to legislative measures introduced in the name of medical freedom but which usually aim to break down established safeguards. In behalf of such bills a great deal of propaganda is put forth, which sounds plausible but seldom will stand analysis. Behind these measures are frequently highly-organized minorities that by their noisy clamor give legislators a false impression as to the strength and importance of the movement.

To frustrate such attempts at legislation it is necessary to keep before the public the essential facts as to the scientific basis on which modern medicine rests. There is no popular agency that can be more helpful in that connection than the newspaper, but the help rendered by the press would be many times more effective if medical associations would take the pains to keep the newspapers fully informed as to what they themselves are doing to combat unsound legislation. There has been too much reticence

on their part to meet propaganda with propaganda and expose the error inherent in some of the measures that are from time to time pressed on legislative bodies.

The country is suffering from a mass of undigested laws. It is frequently easier to prevent the adoption of unwise and unnecessary legislation than to get foolish laws off the statute books once they have been enacted. President Coolidge has rightly said that true laws are discovered, not made. Real discoveries in the realm of law have been relatively few, but the manufacture of laws proceeds with unabated zeal and often leads to ridiculous situations.

The Kansas legislature once enacted a law which provided that "When two trains approach each other at a crossing, they should both come to a full stop and neither shall start until the other is gone." A Tennessee legislature, as recently as 1913, made it "unlawful for the owner or keeper of horses, mules, cattle, sheep, goats and hogs to run at large." A Vermont legislature wrote into the statutes that no nursery stock shall be transported into the State unless accompanied by a certificate of inspection from a nursery stock inspector of the State from which the consignment came. The law made no stipulation as to what this certificate should set forth. It might even certify that the stock had all the diseases known to plant life, yet under the statute such stock could not be barred, because its shipment was accompanied by a certificate of inspection. Our own State of Massachusetts caused to be written into the public statutes this amazing declaration. "Whoever operates an automobile or a motorcycle on any public highway laid out under authority of law recklessly or while under the influence of liquor shall be punished," thus imposing on the motorist the duty of finding out, at his peril, whether certain highways had been laid out "recklessly" or while "under the influence of liquor" before driving his car on them.

Such legislation has no sanctity. Laws must be reasonable and respectable if they are to command public respect. "Obey the law because it is the law," is a cry that fails to be impressive unless the law falls within the category of a law discovered; instead of being fashioned by a driven legislature in utter disregard of truth, justice and human experience. Most of the difficulty that has been encountered in the enforcement of the prohibition law is occasioned by the absurdity of some of its provisions. Is Congress a better judge than the physician as to the quantity of alcohol that should be prescribed in any given case? Should not such matters be left to the conscience, intelligence and discretion of the physician himself? It may be true that a physician occasionally is found who abuses his prescription privileges, but that affords no excuse for viewing the entire medical

profession with suspicion and distrust. The citizen who may legally manufacture fruit juices, not intoxicating in fact—which means in plain language that he can make under the law wine that contains all the alcoholic percentage that unrestrained nature puts into it—is not impressed with that provision of the law which makes him a violator and a nullifier if he carries a bottle of that same wine across the street to a neighbor's house. As President Butler of Columbia has well said: "A citizen is entitled as a natural right to the food, the drink, and the medicine of his choice, and the law which attempts to interfere with these or to restrict the citizen, except as he may by abuse of food or medicine become a public nuisance or a public danger, is a law in name only. It can never be a law in fact, for freemen will not accept it as such."

Emerson laid down a safe rule when he said: "Leave the individual to the rewards and penalties of his own conscience, which work with more energy than we believe, whilst we depend on artificial restraints." This same gentle philosopher, referring to the passion of legislative bodies to attempt the cure of every evil by legal enactments, cited this by way of illustration: "One apostle thought that the mischief was in our diet, that we eat and drink damnation. These made unleavened bread, and were foes to the death of fermentation. It was in vain urged by the housewife that God made yeast as well as dough, and loves fermentation just as dearly as he loves vegetation; that fermentation develops the saccharine element in the grain and makes it more palatable and more digestible. No, they wish the pure wheat, and will die but it shall not ferment. Stop, dear Nature, these incessant advances of thine."

Yet our legislatures attempt to thwart Nature by man-made statutes, and, doubting their success, entrust the conduct of the citizen to the hands of a paternalistic government, instead of encouraging the citizen to develop his own sense of responsibility and holding him to strict accountability for his acts, a formula which alone moulds character.

In introducing the next speaker the close and necessary relation of the clergy and doctor was stressed and the company was congratulated in having the opportunity of again hearing the Bishop of Western Massachusetts, the Rev. Mr. Davies, who told of his early life in Philadelphia and his pleasant relations with Pancoast, Gross, Keen, Osler, Agnew and others, all of whom had contributed much to medicine and inspired in him a respect for medicine which had been heightened by his contact in later times with the physicians of western Massachusetts, many of whom he referred to by name. With a merry twinkle in his eye, he affirmed his admiration for the legal profession, as well

and not subscribing to the sentiment expressed in an English advertisement setting forth the many attractions of a large estate which was for sale but which, as an added inducement to the purchaser, made it prominent that there was not a lawyer within ten miles.

Medicine, he felt, is the product of the Greek intellect, for it was founded on rational science. He made a witty allusion to the English clergyman who catechised a parishioner with reference to non-attendance on church service, specifically asking him if the case was due to the influence of agnosticism, atheism, or other isms, to which the answer came, "No, but was due to rheumatism."

He spoke eloquently of the high moral code of the medical profession and the self sacrificing devotion of the great body of its members.

Dr. David W. Parker responded for New Hampshire as follows:

Mr. President, Members of the Massachusetts Medical Society, and Guests:

At the meeting of the New Hampshire Medical Society your President, Dr. Stone, very graciously extended to me an invitation to attend this dinner as his guest. He assured me that I would not be called upon to speak. Later, I received a letter from him stating that he did wish me to express any ideas I might have on the subject which he also designated, and which he has just announced.

Gentlemen, it seems very presumptuous for me to come from the wilds of New Hampshire to the great Commonwealth of Massachusetts, the traditional seat of Culture and Educational Attainment, to discuss a subject which has commanded the very serious consideration of the foremost thinkers in the field of Medical Education, Economics, and Ethics.

My position here is somewhat analogous to that of Daniel when he was being introduced to the lions, and unfortunately, I am not blest with the same faith as he was, as to the outcome.

We have many problems in New Hampshire, and not the least of them is to find some means to make it more difficult for our patients, who are perfectly solvent financially, to gain admission to some of your institutions on a charity basis.

Most of our problems are not peculiar to our state. They have been on the shelves for years, and have been discussed and theorized about without satisfactory solution in every state and county society for the last generation. I can see no good reason for bringing them out and parading them again at this time.

I will, therefore, confine my remarks to the development of a single thought which I hope you will take home with you from this meeting and consider at your leisure.

1. I would like to present to you for your

consideration the idea of a New England Medical Council composed of Delegates from the several State Societies, to meet at stated intervals and consider the problems, which are so vital to ourselves and the public interest.

The geographic, social and economic unity of New England has long been recognized, the several component states which have in the past so jealously guarded their sovereign rights and have always preferred to work out their own salvation have come to see the power of concerted effort. This spirit is in the air as evidenced by the rapid growth of our service clubs, the frequent meetings of state executives and interstate commissions in all lines of business and transportation. Big business has long recognized the conference as one of the indispensable factors to their success.

Is it not inevitable, therefore, that we, as a profession, if we hope to reap our fullest reward, merge our traditional individualism in the spirit of honest and hearty coöperation and service for our common good.

Before a body of this kind the questions which have so long been a source of worry to our state societies, would very naturally come. Some uniform concerted workable plan of action might be evolved to influence legislation along lines approved by our profession;—something which does not seem possible under present conditions. The question of uniform, state registration requirements and possible reciprocity between states, also measures for the control of "quacks" and "cults" could very properly be discussed and recommendation made.

I trust all of you heard the very able paper by Dr. Painter on Medical Education. Many of us regret that modern requirements have made it necessary for some of our smaller medical schools, which had always maintained high standard of scholarship, to cease the granting of degrees. We, in New Hampshire, particularly, look forward to the time when our own Dartmouth school with a glorious past, and the Alma Mater of many shining lights in medicine and surgery, even to the present generation will again see her way clear to confer degrees of Doctor of Medicine. Might we not look to a representative body of this sort for suggestions, at least, of some means for a rehabilitation of these schools, which for so long held an important position in our educational system. I might go on at length, but the problems which confront us, i. e., questions of public health, problem of rural medical service, etc., are as well known to you as they are to me and make further elaborations unnecessary. I wish to repeat—take this idea home with you and think it over, if it meets with your approval and the approval of the other State Societies, let us take some action upon it.

I believe it would be only a matter of detail

to create a body of this kind which could be made a dynamic power "for our own betterment and the public good."

At the conclusion of Dr. Parker's speech the President brought to a close one of the most instructive and enjoyable meetings of the Society.

THE COUNCIL MEETING

This meeting was held on Tuesday evening. The business was dispatched promptly. The reports of committees were accepted without comment except for a little ripple of discord brought about by the suggestion that the members of the Society ought to support the efforts of the Committee on Legislation and others who are working for better standards in medical education and the extension of legal requirements for vaccination. The critics felt that the members would exert more effort if kept better informed as to the names and locations of senators and representatives.

In answer to this the Secretary of the Committee on Legislation made a spirited reply which should convince anyone that the work of this Committee demands a tremendous amount of time and sacrifice of one's own interests. A man cannot spend many hours of a day at the State House and have time for his practice and even when important matters are up for discussion very few doctors put in an appearance. As for the dissemination of information about the senator or representative, Dr. S. B. Woodward, who was bitterly disappointed because of the lack of evidence of support for the bill to extend vaccination requirements, suggested that since it may be assumed that all good citizens vote for a senator and one or more representatives such persons ought to know who represents them in the State House.

The report of the Nominating Committee submitted toward the end of the session was as follows:

President—James S. Stone.
Vice-President—John M. Birnie.
Secretary—Walter L. Burrage.
Treasurer—Arthur K. Stone.
Orator—William H. Rose.

The ballots confirmed the report of the Nominating Committee. The retiring Vice-President, Dr. M. F. Fallon, declined to allow his name to be considered.

The official report of the proceedings will be prepared by the Secretary and will be published soon. We trust that it will be read by every member.

The success of this anniversary demonstrated that a meeting place where all exercises are held in one building has its advantages, even though the clinical exhibitions often staged in

large metropolitan hospitals are omitted. There is much more sociability and cordiality where members are kept in closer contact and it is a question as to the relative educational advantages of spectacular operating room displays.

The return to the former custom of scientific and commercial exhibits was appreciated. The distinctly educational features were taken advantage of by a large proportion of the members and guests in attendance.

The competition of the commercial exhibits with those of scientific demonstrations showed that the average doctor has a keener interest in the important matters relating to the cure and alleviation of disease than to the lesser important adjuncts.

Although the commercial exhibits were well staged and of distinct value, scientific medicine, as set forth by demonstration, conducted by groups of leading surgeons, internists and public health officials, was of major interest to those in attendance.

The credit for this unusual meeting must be shared by many. Neither the dynamic energy of the President, the devotion to detail of committees, the remarkable quality of the addresses and discussions, nor the excellent exhibits can claim the predominant influence.

If we were obliged to vote on the subject, we suspect that the courtesy and cordiality of the Springfield men and the growing interest of the rank and file in opportunities for securing valuable information would both rank high among the factors which brought about the recognized success of the meeting.

RICKETS AND OSTEOMALACIA

STUDIES on the influence of the routine administration of cod liver oil in the prevention of rickets in infants have recently been reported by May G. Wilson in the *American Journal of Diseases of Children* (31:603, May, 1926), and furnish information seeming to upset our present convictions concerning the value of cod liver oil, although her results will be found in keeping with the observations of many pediatricians. The extraordinary prevalence of demonstrable rickets in the temperate zone, even if it does not reach a stage where health is interfered with, is now generally accepted. That cod liver oil is not an absolute and specific preventive and curative may be a surprise to many who have seen its importance hammered into physicians and laymen alike for several years.

Wilson's observations are interesting and, we believe, correct. She found in a group of infants aged from 1 to 3 months, born in the spring and summer of 1924, that 91 per cent.

developed clinical rickets despite the daily administration of one half to one and one half teaspoonfuls of a biologically tested cod liver oil. A later group, aged from two weeks, receiving daily doses of one, two and three teaspoonfuls of oil, developed rickets in 68 per cent. of the cases, as against 76 per cent. of the control series. Ninety-seven per cent. of infants born in the summer and 91 per cent. of those born in the winter who received cod liver oil showed roentgenographic evidence of rickets. Ninety-seven per cent. of the infants born in the summer, and 98 per cent. of those born in the winter who did not receive cod liver oil showed roentgenographic evidence of the disease.

The correlation of clinical and roentgenographic evidence indicated that active rickets is encountered most frequently in the first 6 months of life, and healing rickets in the second 6 months, and that measures of prevention or control should be instituted in the first month of life. It is of further interest to note that the calcium and inorganic phosphorus in the blood serum of infants under 5 months with clinical and X-ray evidences of rickets, was within normal limits. There did not seem to be, in these series, any relation between the degree of rickets observed and the amount of cod liver oil received. The advantage of the use of cod liver oil seemed to be that infants receiving it showed rickets that healed earlier than that of the control series, and the author wisely concludes that the value of cod liver oil seems to be in control rather than prevention.

It might seem, indeed, as if that which we call early rickets should be accepted as a normal stage in bone development and considered pathological or undesirable only when it gets beyond control. Cod liver oil is still to be recommended, commencing at an age even earlier than we have been accustomed to prescribe it, but too much optimism concerning its effects is unwarranted.

An interesting companion paper in the same journal is that of Hugh L. Dwyer and O. S. Eckelberry on osteomalacia in children. The old question concerning this similarity between rickets and osteomalacia and their identification as the same disease by some authorities is discussed, and the present accepted view stated, namely, that rickets is a faulty deposition of mineral matter in young bone, and osteomalacia a substitution of organic for mineral matter in mature bone. In one of two cases reported cod liver oil did not stop the progress of the condition; in the other case the disease appeared to be stationary.

It is by no means obvious that the true nature of either rickets or osteomalacia is yet established, and even the question of their being possibly the same condition manifesting itself at different ages must be left in doubt.

NEW HAMPSHIRE'S MILK SUPPLY

THE New Hampshire legislature of 1911 provided for the production of a grade of milk to be known as "inspected milk," which milk should be produced from tuberculin-tested and non-reacting cows stabled and kept under good sanitary conditions, the milk being cooled and otherwise properly handled and distributed, with a bacteria count not in excess of 100,000, the statutory limit for common milk being 500,000. The state board of health, according to its official bulletin, "*Health*," has passed a recent order, effective January 1, 1927, abolishing this grade.

The reasons for this change are that "inspected" milk has lost its former significance due to the general increase in tuberculin testing of cattle, that a bacteria count of 100,000 is now regarded as ample for any nearby milk, and that the name "inspected" is actually a misnomer in that consumers are entitled to expect that all milk shall have some degree of inspection, whereas with the limited facilities of the health department this is not the case. Moreover most of the cities of New Hampshire, it is pointed out, now have their own ordinances regulating milk production.

Concord's new milk ordinance is mentioned as a general model for other cities to copy. This is considered unique in that it provides for the control of subsidiary milk products such as cream and ice cream. Butter is not mentioned in this relation, although it is to be expected that this widely consumed product would be subject to the same regulations. Another unique feature is the inclusion of a special bacterial standard for these products in addition to the ordinary bacteria count, at last giving recognition to the well known and universally ignored fact that it is not the number but the type of bacteria in milk that is important from a health standpoint. In Concord *B. coli* differentiations are made in addition to bacterial counts and sediment tests.

One statement in this report that must be heartily approved of is that the only really safe milk is pasteurized milk. The public has been too long accustomed to rely on such fancy regulations of milk as certification and has erroneously accepted tuberculin testing as the last word in the safe guarding of a milk supply. The facts must sometime be faced squarely that no raw milk is or can be entirely safe; that the eradication of bovine tuberculosis protects the consumer only against tuberculosis. So long as any portion of the public demands for any reason, however fanciful, a raw milk, every effort must be made to produce a raw milk that is as safe as it can be made, but this cannot be as safe as milk that is effectively pasteurized. As we have stated before in these pages, milk should be produced in a manner as nearly ap-

proaching the ideal as is possible; bovine tuberculosis should be held in check if that is practical and possible, but if the final factor of safety is to be applied universal efficient pasteurization must be resorted to.

THE BIRTH AND DEATH RATES IN MASSACHUSETTS

THE Division for Vital Statistics of the Commonwealth of Massachusetts has shown efficiently in the comparatively early tabulation of statistics. Most states take longer time than is consumed by the efficient director in charge of this Department.

An especial matter of interest is found in the birth and death rates. In 1925 the birth rate was 20.8 per thousand, which shows a decline from that of 1924 when it was 22.8. The total number of live births in 1925 was 86,014 which is a decrease of 5449 as compared with 1924. The death rate is almost stationary, being 12.5 per thousand, an increase of only 1.

The infant mortality has increased from 67.7 in 1924 to 73.1 in 1925. While these changes are not alarmingly significant, it is disappointing to note a diminished birth rate and an increased death rate.

The whole report is interesting to students of statistics interested in the important problems of the births and deaths.

THIS WEEK'S ISSUE

CONTAINS articles by the following named authors:

DARRACH, WILLIAM, M.A.; M.D. Columbia University College of Physicians and Surgeons 1901; F.A.C.S.; Dean and Associate Professor of Surgery, Columbia University College of Physicians and Surgeons. His essay is The Shattuck Lecture delivered before the Massachusetts Medical Society, June 8, at Springfield, Mass. Subject "Inter-Relations of the Physician and the Hospital," page 1105. His address is 437 W. 39th St., New York City.

GODDU, LOUIS A. O., Ph.G.; M.D. Tufts College Medical School 1905; F.A.C.S.; Chief Orthopedic Surgeon, Boston Floating Hospital; Instructor in Orthopedics, Tufts College Medical School. His subject is "The First Season of Orthopedic Work on the Boston Floating Hospital," page 1111. His address is 510 Commonwealth Ave., Boston, Mass.

SMITH, LAWRENCE W., M.D. Harvard Medical School 1920; Director of Medical Research and Chief of Staff of the Boston Floating Hospital. His subject is "The Season of 1925 on the Boston Floating Hospital," page 1120. Address 40 Wigglesworth St., Boston, Mass.

The Massachusetts Medical Society

FELLOWS ADMITTED TO THE MASSACHUSETTS MEDICAL SOCIETY, MAY 6, 1926— BY DISTRICTS

- Copeland, Newall, Pittsfield, 36 Charles Street. McGill Univ. Faculty of M., 1922.
- Crowley, Thomas Francis, North Adams, 247 Eagle Street. Harvard Univ. M. S., 1909.
- Bakst, Jacob Benjamin, Fall River, General Hosp. Tufts Coll. M. S., 1925.
- Bennett, William Howard, Jr., New Bedford, St. Luke's Hosp. Tufts, 1925.
- Heinz, Herschel, New Bedford, St. Luke's Hosp. Harvard, 1925.
- Kingsbury, Curtis Burt, New Bedford, St. Luke's Hosp. Tufts, 1925.
- Pierce, Arthur Vannevar, New Bedford, 171 Elm Street. Boston Univ. S. of M., 1908.
- Sylvia, Manuel Victorino, New Bedford, 34 Wing Street. Univ. and Bellevue Hosp., 1891.
- Guillimette, Eugene Joseph, Lawrence, 66 Bradford Street. Laval Univ. M. Fac., 1917. (Approved by Comtee. on Med. Dips.)
- Hannigan, Robert Clarence, Amesbury, 109 Main Street. Bowdoin M. S., 1901.
- Adams, John Goldthwaite, Salem, Salem Hosp., Univ. of Vermont Com., 1925.
- Davis, Myron Henry, Saugus, 24 Main Street. Harvard M. S., 1885.
- Foster, George Benjamin, Lynn, 4 Broad Street. Univ. of Pennsylvania, 1900.
- Furbush, Leroy Cleveland, Saugus, 272 Lincoln Avenue. Middlesex Coll. of Med. and Surg., 1916. (Approved by Comtee. on Med. Dips.)
- Halpern, Harry, Peabody, 39 Central Street. Boston Coll. of Phys. and Surgs., 1915. (Approved by Comtee. on Med. Dips.)
- Hull, Ira Butler, Gloucester, 6 Highland Street. Harvard, 1912.
- Leach, Albert Edgar, Lynn, 165 Lewis Street. Middlesex Coll. of Med. and Surg., 1920. (Approved by Comtee. on Med. Dips.)
- Marden, Wilmot Leighton, Lynn, 16 Audubon Park. Boston Univ. S. of M., 1898.
- Michelson, Ellis, Lynn, 282 Summer Street. Middlesex Coll. of Med. and Surg., 1920. (Approved by Comtee. on Med. Dips.)
- Quimby, Charles Morris, Gloucester, 38 Pleasant Street. Maryland Med. Coll., 1904. (Approved by Comtee. on Med. Dips.)
- Rauscher, Raymond Fred, Lynn, 23 Nahant Street. Middlesex Coll. of Med. and Surg., 1917. (Approved by Comtee. on Med. Dips.)
- Hayes, Arthur Warren, Greenfield, 78 Federal Street. Middlesex Coll. of Med. and Surg., 1920. (Approved by Comtee. on Med. Dips.)
- Mathews, Floyd Osborn, Charlemont, 10 Main St. Coll. Phys. and Surgs., Boston, 1920. (Approved by Comtee. on Med. Dips.)
- Agnew, John Robert, Chicopee, 16 Pleasant Street. Univ. of Maryland S. of M., 1914.
- Frankowski, Pauline Hanyszewska, Chicopee, 170 Springfield Street. Tufts, 1920.
- Haggerty, Francis Ignatius, Springfield, 521 Liberty Street. Jefferson M. C., 1923.
- Kirkland, Charles Aimé, Palmer. Univ. of Montreal Med. Fac., 1923. Monson St. Hosp. (Approved by Comtee. on Med. Dips.)
- Lussier, Joseph Hermenegilde, Springfield, 363 North Main Street. Boston Univ., 1922.
- O'Neill, James William, Springfield, 293 Bridge Street. Univ. of Penn. S. of M., 1911.
- Otis, Clara Beckner, Stoneham, New Eng. Sanitarium. Amer. Med. Missionary Coll., 1900. (Approved by Comtee. on Med. Dips.)
- Otis, Elmer Filo, Stoneham, New Eng. Sanitarium and Hosp. Amer. Missionary Coll., 1900. (Approved by Comtee. on Med. Dips.)
- Cleary, George Herbert, Tewksbury, Mass. State Infirmary. Tufts, 1925.
- Cowles, Dwight W., Westford, 54 Broadway. Tufts, 1913. (Note no middle name.)
- Apelian, George Solomon, Belmont, 232 Trapelo Road. Amer. Univ. of Beirut, Syria, Med. Sch. of, 1923. (Approved by Comtee. on Med. Dips.)
- Cohen, Morris Aaron, Cambridge, of 366 Commonwealth Avenue, Boston. Coll. of Phys. and Surgs., Boston, 1919. (Approved by Comtee. on Med. Dips.)
- Dressler, Morris Lawrence, Cambridge, 326 Prospect Street. Tufts, 1921.
- Gane, William Howard, Ashland, 65 South Main Street. Dartmouth M. S., 1908.
- Kane, Theodore J., Everett, 342 Main St. Tufts, 1923. (Name used to be Cohen.)
- Murphy, Thomas Basil, Medford, 59 Farragut Street. Harvard, 1923.
- Paysant, Claude Louis, West Medford. Boston Univ. S. of M., 1910. 76 Boston Avenue.
- Secondari, Epaminonda, Framingham, 20 Avon Street. Regia Univ. of Rome, Italy, 1914. (Approved by Comtee. on Med. Dips.)
- Sanford, Clarence Higgins, Tewksbury, Boston Road. Harvard, 1920.
- Akin, Moses, Roxbury, Off. New York City, 270 Broadway. Tufts, 1925.
- Byers, Randolph Kunhardt, Milton, Off. Boston, 66 Commonwealth Avenue. Harvard, 1921.
- Broyles, Elizabeth Louise, Wellesley, Wellesley Coll., Univ. Nebraska, 1923.
- Cohen, Abram Irving, Roxbury, Off. 491 Commonwealth Avenue, Boston. Tufts, 1923.
- Fried, Boris Mark, Brookline, Off. Boston, 638 Beacon Street. Univ. of Saratov, Russia, 1914. (Approved by Comtee. on Med. Dips.)
- Golden, Harry, Brookline, Off. 366 Commonwealth Avenue, Boston. Middlesex Coll. Med. and Surg., 1920. (Approved by Comtee. on Med. Dips.)
- Greenleaf, Henry Simpson, Brookline, Off. Boston, 43 Kilby Street. Univ. of Pa., 1895.
- Kleinman, Elizabeth Zelda, 427 South Huntington Avenue, Jamaica Plain. New York Med. Coll. and Hosp. for Women. (Approved by Comtee. on Med. Dips., 1918.)
- Kilger, David, Dorchester, Off. Roxbury, Beth Israel Hosp. Tufts, 1925.
- Lesser, Maurice Aaron, Dorchester, Off. Boston, Mass. Homeopathic Hosp. Harvard, 1925.
- McMahon, William Edward Roche, Roxbury, 1466 Tremont Street. Harvard, 1916.
- Prather, George Calvin, Roxbury, Off. Boston, 99 Commonwealth Avenue. Harvard, 1924.
- Rice, George Brackett, Brookline, Off. Boston, 270 Commonwealth Avenue. Boston Univ., 1886.
- Rogers, Horatio, Brookline, Off. Boston, 270 Commonwealth Avenue. Harvard, 1923.
- McKeough, Wilfred Aloysius, South Braintree, Norfolk County Hosp. Tufts, 1924.
- Hardwick, Rachel Louise, Quincy, 62 Spear Street. Boston Univ., 1925.

Treanor, John Peter, Jr., Dorchester, Off. Boston, 520 Beacon Street. Harvard, 1923.

Zonis, Jonathan, Dorchester, 939 Blue Hill Avenue. Tufts, 1924.

Richmond, Ivus Irvin, East Bridgewater, 34 Bedford Street. Harvard, 1902.

Sturgis, Karl Brooks, State Farm, Bridgewater. Maine Med. Sch., 1907. (Approved by Comtee. on Med. Dips.)

Allen, Edwin Howard, Boston, 37 Hancock Street. Harvard, 1889.

Baker, Henry Merton, Boston, 892 Huntington Avenue. Coll. of Med. Evangelists, Calif., 1922.

Bowmar, Harris Ewing, Boston, 82 East Concord Street. Boston Univ., 1925.

Cleaves, Edwin Nelson, Boston, 39 Hemenway Street. Harvard, 1915.

Costa, Domizio Augustine, Revere, 38 Harrington Avenue. Tufts, 1908.

Crotty, Martin Francis, Boston, 82 East Concord Street. Boston Univ., 1924.

Davis, Max, Boston, 82 East Concord Street. Harvard, 1925.

Findlay, Francis McRae, Roxbury, Boston, 194 Pilgrim Road. Harvard, 1922.

Fred, Gus Bernard, Boston, 298 Marlborough Street. Harvard, 1922.

Layton, Roy Wilford, Winthrop, 46 Bartlett Road. Univ. Kansas S. of M., 1913.

McGarty, Michael Edmund, Boston, 520 Commonwealth Avenue. Harvard, 1922.

Pattajo, Christus Alexander, Belmont, Off. Boston, 2 Dillaway Street. Harvard, 1911.

Robbins, Waldo Whiting, South Boston, Carney Hosp. Boston Univ., 1924.

Rutenburg, Morris, Boston, 67 Chambers Street. Imperial Moscow Univ., 1916. (Approved by Comtee. on Med. Dips.)

Silverman, Harry, Revere, 137 Shirley Avenue. Tufts, 1924.

White, James Clarke, Boston, Mass. General Hosp. Harvard, 1923.

Whitney, Edward Tracy, Boston, 27 Audubon Road. Harvard, 1924.

Wright, Elizabeth, Boston, 534 Beacon Street. Coll. Phys. and Surgs., Columbia, 1921.

Bacon, John Lowell, Southborough. Hahnemann Med. Coll. and Hosp., Phila., 1897.

Brassau, Arthur Clarence, Worcester, State Hosp. Tufts, 1925.

Brigham, Harold Kingsbury, Southbridge, 80 Hamilton Street. N. Y. Homeopathic Med. Coll. and Flower Hosp. (Approved by Comtee. on Med. Dips.)

Cicma, Haralambie George, Worcester, 98 Austin Street. Boston Univ., 1924.

Draper, Russell Tucker, Worcester, State Hosp. Tufts, 1925.

Harvey, Frank T (no middle name), Milford, 88 Congress Street. N. Y. Homeopathic Med. Coll. and Flower Hosp. (Approved by Comtee. on Med. Dips.)

Johns, Juanita Pearl, Worcester, State Hosp. Boston Univ., 1925.

Lancaster, Alston Howard, Worcester, 50 Orange Street. Univ. of Maryland, 1903.

McGugan, Arthur, Worcester, State Hosp. Univ. Michigan M. S., 1892.

Piasta, Peter Ferdinand, Dudley, Off. Webster, 207 Main Street. Boston Univ., 1924.

Smith, Carleton Tower, Worcester, Memorial Hosp. Harvard, 1924.

Butler, David Mathew, Brockton, 231 Main Street (Readmitted by Censors.)

Archibald, William Charles, Cambridge, 837 Massachusetts Avenue. McGill Univ., 1922.

MEMBERSHIP CHANGES

OFFICIAL LIST FROM MAY 1, 1926, TO JUNE 1, 1926

NOTE:—The deaths have been reported in the columns of the JOURNAL. The membership changes made by the Council, June 8, will appear in the Proceedings of that body, in the JOURNAL.

Barnes, Louis D., from Lanesborough to Pittsfield, 423 North Street.

Bridgwood, David, Brockton, address now 424 Prospect Street.

Buck, W. E., from Wilmington (Middlesex East) to Randolph (Norfolk), 420 North Main Street.

Bushold, Charles D., Lawrence, is now at 46 Amesbury Street, Cregg Building, Suite 303.

Casey, John F., of Allston, now has an office at Boston, 475 Commonwealth Avenue.

Colcord, Marshall, Worcester, has moved to 105 Hamilton Street, Southbridge.

Cunningham, Thomas P., Worcester, from 875 to 914 Main Street.

Dayton, Nell A., from Wrentham (Norfolk) to Medford (Middlesex South), office Boston, Department of Mental Diseases, State House.

Gaunt, George A., from Worcester (Worcester) to Foxborough (Norfolk), Foxborough State Hospital.

Gosman, G. H. R., has moved from Brookline to Waban, 57 Metacomet Road.

Graves, Robert J., Concord, N. H., from 3 North State Street to 27 Forest Street.

Greene, David D., Boston, has moved from 402 to 466 Marlborough Street.

Hamilton, Annie Lee, Boston, has a temporary address at Sandwich, Mass.

Harrington, Daniel James, from Dorchester (Norfolk) to Quincy (Norfolk South), office Boston, 27 Bay State Road.

Heffernan, Roy J., has moved his Boston office from 510 to 524 Commonwealth Avenue.

Jacoby, Rudolph, from Weymouth to Quincy, office Boston, 270 Commonwealth Avenue.

MacKnight, Adam S., Attleborough, now Bristol County Tuberculosis Hospital.

Marsh, Albert, from Southborough (Worcester) to West Newton (Middlesex South), 826 Watertown Street.

Millet, Charles S., Brockton, now has his office at 40 School Street.

Mitchell, Harold H., has moved from Fall River (Bristol South) to Jackson Heights, Long Island (Non-Resident List), office New York City, 370 Seventh Avenue.

Morse, Jacob L., from Roxbury (Norfolk) to Springfield (Hampden). Temporary address New York City, 224 East Eighteenth Street.

Partington, C. B., Denver, Colo., now at 1135 South Ogden Street.

Remick, Sumner H., has moved from Reading to Cincinnati, Ohio, 711 Doctors Building, Eighth Street.

Roach, Alfred J., has left the Norfolk County Hospital, South Braintree, and is at Chandler Street, Tewksbury, temporarily.

Solomon, Bennett, Springfield, has moved from 235 to 1695 Main Street.

Steinberg, N., Dorchester, is now at 67 Fowler Street.

Stevens, William R., Abington, now at 204 Chapel Street.

Sullivan, C. A., South Braintree, now 20 Pond Street.

Woody, Melver, Springfield, has moved to 158 Maple Street.

Worcester, George F., from Haverhill (Essex North) to Englewood, N. J. (Non-Resident List), 240 Engle Street.

MISCELLANY

ANNUAL NARCOTIC REGISTRATION

RETURNS MUST BE FILED WITH THE COLLECTOR
BY JULY 1 OR PENALTY ATTACHES—SPECIAL
CIRCULAR ISSUED BY THE COLLECTOR

If you desire to continue your present narcotic registration, forms, properly executed, with the proper amount of tax or taxes, must be returned to this office so that they will reach here on or before July 1, 1926, or penalty will attach.

Your attention is called to the fact that if you desire to be qualified in two or more classes under the law it will not be necessary to file a separate application for each class, but only to check the classes in which you desire to be registered. In case you desire reregistration in class 1, 2, 3, or 4, payment of tax for any such class will entitle you also to register in class 5 by checking the proper block on the form without any additional payment of tax whatever. You are urged, therefore, to check the class 5 block if you contemplate the handling of narcotic preparations exempt from stamp tax under the provisions of Section 6 of the Harrison Narcotic Law, as amended. *Registry in class 5 is required in order to sell, manufacture, dispense, distribute, or administer exempt narcotic preparations.*

The inventory on Form 713 must be prepared under oath or affirmation, in duplicate, the original of which is to be kept on file by the maker, and the duplicate forwarded to the Collector. No inventory on this form is required for class 1 and 2. An inventory must be made for class 5 if registry is desired in that class. The inventory for class 5 refers only to taxable narcotic drugs which might be set aside for use for manufacturing exempt preparations, and does not require the listing of preparations and remedies classed as exempt narcotic preparations. In most instances no taxable narcotic drugs are on hand in class 5. If such is the case, the inventory used for registration in one of the higher classes may also be used for class 5, provided a notation—"no taxable drugs in class 5"—is placed conspicuously on both the original and duplicate copies of the inventory.

SPECIAL NOTICE

Under the new Revenue Act approved February 26, 1926, the rate of tax of narcotic registrants in class 4, which includes physicians, dentists, veterinary surgeons, hospitals, sanitariums, educational institutions, etc., has been changed from \$3 to \$1 per annum. Payment should be by *certified* check, money order, or cash.

Please read the forms carefully before executing them so that your reregistration may be

properly accomplished. *If your present address does not correspond with that printed on the application, correction should be noted and date of removal given.*

To avoid payment of penalty return all forms with proper remittance in the form of *certified* check, postal money order, or cash, *not later than July 1, 1926.*

THOMAS W. WHITE, Collector.
Park Square Building, Boston, Massachusetts.

TUFTS COLLEGE MEDICAL SCHOOL
GRADUATING CLASS 1926

Rocco ABBATE, Edwin Olin Angell.

Felicia Ann Banas, Veronica Claire Barrett, George David Beeher, Romeo Armand Bernard, Harry Black, Carl Elmore Blaisdell, Isabelle Forbes Borden, Jacob Brenner, Julius John Burgiel, Arthur Vincent Burns.

Attilio Canzanelli, William Robert Carson, Leaman Henry Caswell, Alfred Gaetano Cechione, Christos Christoliakos, Raymond Rapozo Costa, William Francis Coughlin, Eleanor Elizabeth Cowan.

George Dewey Dalton, Edward Ralph DeRoma, Thomas Edward Dinan, Otis John Douchinett, Francis Timothy Downey, Roger Thomas Doyle, Walter John Dufrene.

Kirkor Gregory Eliot, Joshua Epstein, A.B. John Baptist Fasanello, Edward Warren Feeley, Morris Ferestein, Jacob Nathan Fishbein, Hyman Benjamin Friedman, Susannah Friedman, B.S., Lewis Edward Fritz.

Clarence Jost Gabel, Charles A. Galligan, Jr., Joseph Hyman Gillman, Julius Ginsburg, Manuel Morris Glazer, Frank Max Goldys, A.B., Myer Eli Golinsky, Ella Joceelyn Goodale, Earl Frederick Greene.

Frances Margaret Hennessy, Oscar Hurvitz, Louis John Iacovino, Max Lionel Ignatoff, William Ralph Izzo.

Joseph Charles Johnston.

Arthur Kansersstein, A.B., Joseph Herbert Kaplan, James Edward Keirans, Louis Keller, Dominique Georges Laberge, Irving Labinsky, William Spencer Lawler, Frank Robert Leary, Alexander Abraham Levi, Isidor Levine, B.S., William Samuel Levy.

Luther Alexander March, Irving Jacob Marshak, Humphrey Leo McCarthy, Laurence Wilfred McGrath, Carl Foster Meekins, Edward Graham Messer, David Lawrence Milikof, Grace Milliken, Gordon M. Morrison, A.B., Joseph Thomas Murphy, Michael Joseph Murphy, Joseph Enos Nunes, Jr.

Frederick B. O'Regan, B.A., Patrick A. O'Sullivan, A.B., Thomas Henry O'Toole, William Paris, John Monroe Peckham, Nellie Pelechowiez, Samuel Maurice Perlmutter, Guy Charles Pesce, B.S., David William Pope.

Carlton Hobart Rand, Howard Clinton Reed, Stratis George Roccas, David Rose, Joel Rosen-

berg, Joseph Rosenthal, Benjamin Russman, Mildred Louise Ryan, A.B.

Peter Joseph Scafariello, Frank Pietro Seigliano, A.B., Hyman Shrier, Samuel Sidell, Morris Siegartel, Nathan Silverman, Nathan Joseph Simmons, Solomon Boruch Singer, John William Suplicki.

James Tesler, Rockwood Harland Thayer, Cecil Frank Thompson, A.B., Herbert R. Toombs, A.B., Helen Barbara Tursky.

Albert LeRoy Vandale, Othilio Patricia Vieira.

Norman Alphonse Welch, Daniel Redfield Wheeler.

Nathan Zibel.

RECENT DEATH

JACKSON—DR. FRED WILLIAM JACKSON, a non-resident Fellow of the Massachusetts Medical Society, died at his home in Jefferson, Me., June 4, 1926.

Dr. Jackson was a graduate of the Long Island College Medical School in 1885, joined the State society in that year and practiced in Weston. He had been retired for a series of years.

REPORTS AND NOTICES OF MEETINGS

JOINT CONFERENCE ON MATERNAL AND INFANT HYGIENE

A JOINT Conference on Maternal and Infant Hygiene will be conducted by the State Department of Public Health with Barnstable County group of the Massachusetts Association of Directors of Public Health Nursing Organizations at the Woman's Club, Hyannis, June 18.

The program is as follows:

11 A. M.—Presiding: Merrill Champion, M.D.

Methods in Health Education, Miss Georgie Collins, Director of Health Education, Malden. Discussion.

12 M.—Meeting of Directors of County Visiting Nursing Association.

JOINT MEETING

1:30 P. M.—Round Table on Standards of Prenatal Nursing Service in a Community.

(a) General Considerations, Merrill Champion, M.D., State Department of Public Health.

(b) Nursing Aspects, Helen M. Hackett, R.N., State Department of Public Health.

(c) Community Aspects, Winifred Erskine, R.N., Hyannis.

Discussion.

THE SIXTEENTH CLINICAL CONGRESS OF THE AMERICAN COLLEGE OF SURGEONS

THE plans for the sixteenth Clinical Congress of the American College of Surgeons to be held in Montreal October 25-29, 1926, have been

perfected. The preliminary clinical program with an outline of the general plan for the meeting appears in the June issue of the official journal, "*Surgery, Gynecology and Obstetrics*."

In a general way this year's Congress will be organized along the lines of sessions in recent years. All departments of surgery will be included in the clinical program being arranged by a committee of Montreal surgeons with Dr. Alfred T. Bazin as chairman. When finally revised, it will completely represent the clinical activities of Canada's great medical center. Of special interest to those whose practice is limited to surgery of the eye, ear, nose, and throat is a series of clinics, demonstrations and papers being arranged by a committee of which Dr. Albert Lassalle is chairman.

The hotel situation in Montreal is greatly improved over 1920, and we are definitely assured of comfortable accommodations for fully 3,000 people.

Clinical Congress headquarters will be at the Windsor Hotel.

REPORT OF NEW HAMPSHIRE MEDICAL SOCIETY MEETING

THE 135th annual meeting of the New Hampshire Medical Society was held at Concord, N. H., May the 25th and 26th, 1926. The Merrimaek County Medical Society acting as the committee of arrangements, Dr. Charles H. Dolloff, Chairman. This was one of the largest and most interesting meetings in the history of the Society. Great credit is due the officers of the Society particularly the President, Dr. Thomas W. Luce of Portsmouth, and the Secretary, Dr. D. E. Sullivan of Concord, N. H., and the committee of arrangements for their extraordinary and untiring efforts. The attendance was large, there being 261 registered members and it was estimated that during the afternoon meeting of the last day there were 1000 persons in attendance.

The scientific program included Dr. Charles Mayo of the Mayo Clinic, Dr. Walter Chipman, president of the American College of Surgeons, of Montreal, Canada, and was as follows:

TUESDAY, MAY 25, 10:30 A. M.

"The Thymus Gland and Anaesthesia"

Henry H. Amsden, Concord

Discussion opened by A. L. MacMillan, Concord; F. S. Eveleth, Concord.

"Syphilis in General Medicine"

Harold A. Des Brisay, Hanover

Discussion opened by C. A. Weaver, Manchester; R. W. Robinson, Laconia.

"Chronic Nephritis and Hypertension"

James P. O'Hare, Boston

Discussion opened by C. F. Flanders, Manchester; W. P. Clare, Portsmouth.

TUESDAY, MAY 25, 2 P. M.

President's Address

Thomas W. Luce, Portsmouth

"Retro-Spection, Antero-Spection: Speculation"

William E. Reed, Nashua

Discussion opened by A. W. Shea, Nashua;
J. J. Cobb, Berlin.*"Report of a Case of Fracture of the Spine"*

Harris E. Powers, Manchester

Discussion opened by Carleton R. Metcalf,
Concord; Ezra Jones, Manchester.*"Dysmenorrhoea—Its Etiology and its Treatment"*

(Illustrated by lantern slides)

W. W. Chipman, Montreal

Discussion opened by Eugene B. Eastman,
Portsmouth; Ella B. Atherton, Nashua.

WEDNESDAY, MAY 26, 10 A. M.

"Streptococcus Sepsis, with Report of Case"

Ira J. Prouty and Osman H. Hubbard, Keene

Discussion opened by Emery M. Fitch, Claremont;
Edward C. Batchelder, Dover.*"Significant Findings from One Thousand Physical Examinations of College Students"*

Nathan L. Griffin, Durham

Discussion opened by Sibley G. Morrill, Concord;
Fred P. Claggett, Newport.*"Methods of Reducing Loss of Time from Illness Among School Children"*

J. H. Townsend, Concord

Discussion opened by R. H. Brooks, Claremont;
Edwin Holmes, Exeter.*"The Use of Scarlet Fever Toxin and Anti-Toxin in the Prevention and Cure of Scarlet Fever"*

William H. Park, New York City

Discussion opened by Charles Duncan, Concord;
Frank N. Rogers, Manchester.

WEDNESDAY, MAY 26, 2 P. M.

"The Results of an Organization Promoting Efficiency in Hillsborough County General Hospital"

(Lantern Slides)

George V. Fiske, Manchester

Discussion opened by W. E. Reed, Nashua;
C. E. Butterfield, Concord.*"Cholecystography"*

Harry O. Chesley, Dover

Discussion opened by A. S. Merrill, Manchester;
F. S. Eveleth, Concord.*"Pyclography as an Aid to Diagnosis"*

Elmer J. Brown, Manchester

Discussion opened by J. F. Rock, Nashua;
A. S. Merrill, Manchester.*"Developmental Anomalies, Especially of the Genito-Urinary Tract"*

Charles H. Mayo, Rochester, Minn.

Discussion opened by Fred B. Lund, Boston;
John P. Bowler, Hanover.

The exhibit was large and well patronized.

At the meeting of the House of Delegates May 26 the following officers were elected for the ensuing year: President, Dr. David W. Parker of Manchester, N. H.; Vice-President, Dr. Emery M. Fitch of Claremont, N. H.; Secretary-Treasurer, Dr. D. E. Sullivan of Concord, N. H.; Trustee for three years, Dr. A. H. Harriman of Laconia, N. H.; Councillor, five years, Dr. A. W. Mitchell of Rockingham, N. H.; Councillor, five years, Dr. H. D. Chesley of Strafford, N. H.; Speaker, House of Delegates, Dr. Joseph J. Cobb of Berlin, N. H.; Vice-Speaker, Dr. F. E. Clow of Wolfeboro, N. H.; Delegate to Council on Medical Education and Hospital, A. M. A., Dr. E. H. Carlton of Hanover, N. H.; Delegate to Bureau of Health and Public Institution, A. M. A., Dr. H. A. Streeter of Manchester, N. H.; Anniversary Chairman, Dr. Ezra Jones of Manchester, N. H.

The 1927 meeting is to be held at Portsmouth, N. H., the exact date to be determined by the President, Secretary and Dr. Thomas W. Luce.

A special committee was appointed to revise the constitution and by-laws.

Dr. Charles Mayo, Dr. Walter W. Chipman were elected honorary members.

Resolutions were passed on the death of Past Vice-President Dr. John H. Gleason

On the evening of the first day the members, their wives, and guests were entertained by Governor and Mrs. Winant at their attractive home, a greeting being extended by Governor and Mrs. Winant in person. A bountiful lunch was served on the lawn and the guests were then invited to inspect the rare and antique pieces of furniture in the Winant home. The members and friends were then entertained with music and moving pictures at the St. Paul's School Auditorium, following which dancing and refreshments were enjoyed at the St. Paul's Community House.

The banquet was the concluding feature of the last day and has been previously reported.

There were a great number of ladies present at the meeting, due in part to the enthusiastic response to the organization of the Ladies' Auxiliary.

JOHN F. HOLMES, M.D.,
New Hampshire Correspondent.